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M E D I C A L  
C O M M E N T A R I E S.

FOR THE YEARS 1781-2:

EXHIBITING

A CONCISE VIEW OF THE LATEST AND MOST  
IMPORTANT DISCOVERIES IN MEDICINE  
AND MEDICAL PHILOSOPHY.

COLLECTED AND PUBLISHED

B Y

ANDREW DUNCAN, M. D. F. R. & A. S. Ed.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES  
FOR SCOTLAND, FELLOW OF THE ROYAL COLLEGE OF  
PHYSICIANS, EDINBURGH, AND MEMBER OF THE  
ROYAL SOCIETIES OF MEDICINE OF PARIS,  
COPENHAGEN, EDINBURGH, &c.

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*Neglecta reducit, sparsa colligit, utilia selegit, necessaria  
ostendit, sic utile.* BAGLIVI.

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VOLUME EIGHTH.  
THE SECOND EDITION CORRECTED.

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L O N D O N:  
PRINTED FOR C. ELLIOT, T. KAY AND CO. AT DR  
CULLEN'S HEAD, No. 332, STRAND, LONDON,  
AND C. ELLIOT, EDINBURGH.

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M,DCC,LXXXVII.



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T O T H E

R E A D E R S of the *Medical Commentaries*.



GENTLEMEN,

**A**T the commencement of the last volume of these Commentaries, a change was made in the title-page, for reasons with which I reckoned it unnecessary to trouble you. When I then, however, assumed to myself the compilation of a work which had formerly been presented to the public as coming from the hands of a society, I observed that the execution of the task I had undertaken would not hereafter be more dependent on my own exertions than it had been formerly. And accordingly, I have not been disappointed either in aid from correspondents at a distance, or in permanent assistance from some Medical friends at this place. Notwithstanding this, however, it is now incumbent on me to solicit your indulgence for the

irregular manner in which the publication has been conducted during last year.

This has in some measure arisen from circumstances which it was impossible for me to prevent. But it has also, in part proceeded from my post poning, on different occasions, the conduct of this undertaking, to engagements of a more urgent nature, and which did not admit of delay. And although it is my intention to continue this publication with as much regularity as I am able, yet I cannot promise that similar causes may not hereafter be productive of similar interruptions. May I therefore hope, that you will neither be disappointed nor offended should such irregularities again occur.

I flatter myself, however, that whatever irregularities may take place, will in no degree diminish the utility of this work. I am fully sensible, that if the materials and opportunities of information which I possess, were in the hands of any one of greater abilities, and more leisure, the advantages to be derived from a careful perusal of these Commentaries might be much increased. As far, however, as my time or talents can afford satisfaction to the liberal and candid mind, they shall be exerted with unremitting industry. Such exertions

exertions will be a more powerful apology for future imperfections in this work, than any thing else that could be urged. And while I employ this argument for soliciting your indulgence, I hope it may also have some weight in procuring your assistance. When facts occur to you in practice, which, while they convey useful information to yourselves, may also be instructive to others; the transmission of these for publication in the Medical Commentaries, will confer a singular obligation on

Your most obedient Servant,

EDINBURGH, }  
June 1. 1781. }

A N D R E W   D U N C A N.

M E D I-



M E D I C A L  
COMMENTARIES.



S E C T. I.

*An Account of New Books.*



I.

*Dissertatio de utilitate Electrificationis in Arte Medica, seu in curandis Morbis. Auctore Joanne Bohadsch. Pragæ & Dresdæ. 4to.*

THE treatise before us we find divided into four different chapters.

I. De effectu vis electricæ in diversis corporibus.

A 4

II. De

II. De theoria morborum in quibus electrificatio potissimum adhibenda est.

III. De therapeia hemiplegiæ.

IV. De observationibus hemiplegicorum per electrificationem curatorum.

In the first of these, our Author enumerates a great many experiments on the various effects of electricity on different fluids and solid bodies; by all of which, it appeared evident that electricity, when applied to any substance for the space of several hours, has a considerable influence in producing a diminution of its weight.

Of these experiments we shall here present our readers with a short view.

Four ounces of river-water being put into a glass-vessel of four inches diameter, and being kept in an electrified state for the space of five hours, was in that time found to have lost eight grains of its weight; whereas, the same quantity of water, contained in a vessel of the same size, to which electricity was not applied, in the same space of time lost only three grains of its weight.

The same experiment being repeated, with the water contained in a tin instead of a glass vessel, the result was found to be exactly similar, with this difference, that the water in the electrified

trified tin-vessel, in the same space of time, was found to have lost ten grains of its weight in place of eight.

In the same space of time, and in similar circumstances, the following articles being kept in an electrified state, were affected as follows :

Four ounces of olive oil,	-	lost nothing.
of vinegar,	-	three grains.
of water impregna-		
ted with nitre,		three grains.
of new milk,	-	four grains.
of urine,	-	nine grains.
of spirit of turpentine,		ten grains.
of spirit of wine,		ten grains.
of vol. sp. of sal amm.		thirteen gr.

The same experiments were repeated with the same liquids contained in vessels of less diameters, when the quantity of fluid lost by evaporation was found to diminish in proportion to the size of the vessel made use of.

A pear weighing about four ounces and a half, being kept in an electrified state for the space of full five hours, lost six grains of its original weight ; whereas a pear of exactly the same weight, to which no electricity was applied,

ed, did not in that space of time lose any of its weight.

A piece of dried oak wood being kept in a similar electrified state for the same space of time, did not lose any of its original weight.

A bundle of iron keys, - lost nothing.

Two new laid eggs, - two grains.

A piece of new-baked bread, three grains.

A piece of raw beef, - three grains.

A piece of boiled beef, - four grains.

A piece of moist sponge, - six grains.

A bunch of grapes, - seven grains.

From these our Author draws the following conclusions :

1. That electricity increases the natural evaporation of liquids, unless such liquids are possessed of a very great degree of viscosity, as is the case, he observes, with olive oil.

2. That this increase in the evaporation of liquids, produced by electricity, is in proportion to their degree of volatility.

3. That electricity in this respect acts with greater influence on fluids contained in metallic than on those contained in glass vessels.

4. That this increase of evaporation produced by electricity on liquids, is in proportion to the extent

extent of their surfaces exposed to the atmosphere ; and

5. That electricity has an evident effect in diminishing the weight even of solid bodies, when such a quantity of moisture is contained in them as is necessary for the purpose of evaporation.

Our Author now proceeds to shew, that electricity being applied for some time to vessels replete with fluids, an increased discharge of their contents is thereby always produced ; as a proof of which, the following experiment is related.

Let a common egg be perforated at one end, so as to discharge all its contents, both the white and yolk ; and a siphon being introduced, so as not to touch the bottom of the egg, let it be completely filled with water, and then weighed. The egg is then to be emptied by making the water pass through the siphon, and by weighing again, it may be known exactly what quantity of water is discharged in a given time. The egg is now to be filled again, and on being electrified for some hours, the water contained in it will be found to flow with much greater rapidity than when no electricity was applied. This experiment, however, we are informed, will not  
succeed,

succeed, if instruments are used of larger capacities than those described.

That the vegetation of plants is considerably increased by the proper application of electricity has long been known ; as a proof of which, the following experiment is related by our Author.

Two vessels exactly similar being filled with earth, the same quantity of mustard-seed was sown in each, and both being placed upon the same bench, a quantity of water was now and then sprinkled upon them. This was done on the 9th of October.

On the 11th, one of the vessels was electrified at different times for the space of ten hours. In other respects the treatment of both continued to be exactly the same.

On the 13th, the electrified vessel pushed forth three plants of mustard, but no appearance of vegetation was observable in the other. This evening electricity was again applied for the space of three hours to the vessel formerly electrified.

On the 14th, new plants of mustard were observed in the electrified vessel, while one only appeared in the other. The former was this day again electrified for the space of five hours.

The

The same kind of management was continued till the 19th, when all the seed in the electrified pot was found to have produced plants; and these at least four times the length of those in the other; while in this last too, only three plants were found to have sprung from all the seed that was sown. We are here told too, that this difference in the process of vegetation could not arise from the seed in the one pot being good and the other bad; for no choice had been made, and in fact the seed in the pot which was not electrified did at last all germinate. The same experiment we are informed has been repeated on different plants, and uniformly with a similar result.

In another section of this chapter, various experiments are related, all tending to shew, that electricity has a considerable influence in promoting the natural perspiration of animals. These experiments were made with whelps, pigeons, and other animals; and an increased degree of perspiration was always found to be produced by the application of electricity.

In the 2d and 3d chapters of this Work, our Author delivers the theory of hemiplegia; and in the 4th and last chapter, some cases are related,

ted,

ted, in which the good effects of electricity in the cure of hemiplegia were very evident.

A chairman, 20 years of age, of a tall stature and corpulent habit of body, had for ten years been afflicted with hemiplegia. He could not walk even with the assistance of a cruch, but with great difficulty. The eye of the affected side was become altogether uselefs ; and the eye of the opposite side was now so weak as to put it out of his power to read small printed books. The hand of the paralytic side was very feeble in its motions, and had lost almost entirely the sense of feeling ; and together with these and other symptoms of hemiplegia the patient was much tormented with lumbago.

May 29. He was this day electrified for the space of half an hour, by taking sparks from the hand and fingers of the arm affected ; and likewise from the eye of the diseased side.

30th. The patient slept better than usual last night. He was this day electrified as before ; and the weak side was ordered to be well rubbed at bed-time with warm cloths.

June 4. The electricity was still continued ; one constant effect of it, was a considerable flow of tears. He now could distinguish even small  
objects,

objects, and could walk with much greater ease than before.

27th. The electricity was hitherto continued ; the patient got gradually better, and is at this time perfectly well. The eye, of which he lost the use many years ago, still continues indeed in the same state. Other three cases are afterwards related by our Author, in which the effects of electricity in the cure of this disorder were very remarkable ; and we shall conclude our account of this Work by a short account of one of them.

A young man, 15 years of age, had laboured under a hemiplegia from his infancy ; and a great variety of remedies had been had recourse to, but with no effect. The arm and leg of the left side were much emaciated ; some degree of feeling still remained ; but the arm was so debilitated, that the hand could neither grasp nor retain any thing.

On the 8th of June, electricity was tried, and was continued almost daily till the 20th.

On the 13th, the affected arm was become somewhat stronger, and prickling pains were felt in it through the night.

On

On the 17th, the arm was become stronger, and had even begun to receive an increase in bulk.

By the 17th of July he was almost well ; he could now easily carry a weight of 30 pounds ; and on the 20th he was dismissed cured.

## II.

*Specimen Inaugurale Medicum, sistens experimenta quædam, quibus constitit, eas partes esse sensu præditas, quibus Hallerus cum aliis quibusdam omnem sentiendi facultatem cum irritabilitate denegat. Auctore Ignatio Radniczky. 4to. Pragæ.*

SEVERAL years ago a doctrine was introduced to the world, by the late celebrated Haller and his disciples, tending to prove, that the tendons, periosteum, dura mater, and some other membranous parts, are all destitute of sensation. Various answers have been published to this opinion ; but as the Work now before us enters more fully upon this investigation than any we have met with, and as the Author's ideas are all supported by a series of well conducted experiments, we shall therefore give a particular detail  
of

of such of these as appear to be most conclusive.

This Work is divided into four sections : The first is entitled, *De tendinibus* ; the second, *De periosteo & pericranio* ; the third, *De dura & pia matre* ; and the fourth, *De pleura & peritonæo*.

### SECT I. *De Tendinibus.*

A middle sized dog was the subject of the first of these experiments ; which was performed, we are told, in the presence of Professor M'Niven, and several other Members of the University.

The animal being properly secured, the skin was cut, in a longitudinal direction, along the course of the tendo Achillis. During this incision, the dog appeared to be in very great pain ; it was observed, however, that although he did not complain, either upon puncturing or cutting off a piece of skin, previously separated from the parts below, yet that the pain was constantly renewed, on attempting to dissect a portion of skin not yet detached from the contiguous parts.

The tendon with its sheath being now laid bare, a very slight degree of irritation with a  
B
needle,

needle, was found to produce a great degree of pain ; but least any fallacy might occur from the tendon still remaining covered with its vagina, it was at last perfectly denuded, when the same degree of irritation was attended with the same effect as before. A needle being pushed into the substance of the tendon, evidently occasioned very severe pain ; and the needle being allowed to remain there for some time, it was afterwards found, in withdrawing it, that the animal complained severely on its being in the least degree moved. Violent signs of pain, too, occurred on dividing, even with a cutting instrument, a few of the fibres of this tendon.

In the eighth experiment on this subject, the tendon of one of the muscles in the leg of a horse was laid entirely bare ; and it was uniformly observed, that on puncturing the tendon with a needle, the animal made violent exertions, in order to extricate himself from his confinement. The same degree of feeling, however, did not seem to occur from cutting off a slice entirely from any portion of the tendon.

In experiment ninth, the external oblique muscle of the abdomen in a dog was laid bare ; and, on the application of oil of vitriol to the  
aponeurosis

aponeurosis of that muscle, only a slight degree of uneasiness seemed to ensue; but the animal appeared evidently to suffer the most violent pain, either from pressing these two parts between two sharp bodies, or from puncturing them with a lancet.

In the twelfth and last experiment of this section, which we mean to communicate, there is related the case of a soldier, whose hand had been so severely cut as to induce over the whole of it a tedious dangerous suppuration; and on the matter being evacuated, some of the tendons of the fingers, particularly these of the perforans and perforatus muscles, were laid entirely bare. In this case, we are told, the sensibility of tendons appeared to be great indeed; for although the patient was of a robust constitution, yet if by accident, at any of the dressings, these tendons happened to be touched by the probe, even in the most gentle manner, the most violent pain, to such a degree almost as to induce fainting, was instantaneously produced. From these, and various other experiments on the same subject, no doubt, our Author thinks, can remain of tendons being possessed of a very considerable degree of sensibility.

SECT. II. *De Periosteo, atque Pericranio.*

EXPERIMENT I. A middle sized dog being properly secured, the teguments of the thorax were dissected off, leaving the ribs covered with the periosteum only. On beginning to separate the periosteum from the bone, the dog complained severely : he became again quiet on desisting from the operation ; but a very violent degree of pain seemed always to be induced, so soon as the scalpel was again applied to the periosteum.

EXPERIMENT II. The same experiment with the foregoing was put in practice with a horse, and the result was exactly similar, the horse always exhibiting certain signs of his suffering severely, as soon as any attempt was made upon the periosteum.

EXPERIMENT III. The pericranium of a dog being denuded of the common teguments, the animal complained slightly on any attempt being made to irritate that membrane with a lancet. On touching it with lapis infernalis, a more severe degree of pain seemed to ensue ; but the most violent torture was induced by the application of a single drop of oil  
of

of vitriol. The pericranium being rubbed with a sponge immersed in cold water, likewise created a great degree of pain.

EXPERIMENT IV. The periosteum in the leg of a dog being laid perfectly bare, by dissecting off the common teguments, muscles, and tendons, a very violent degree of pain was found to be induced, by endeavouring to separate the periosteum from the bone. This was likewise the case by applying butter of antimony to the surface of that membrane.

EXPERIMENTS V. and VI. being all that were made upon this subject, tended to shew evidently, that the periosteum is possessed of a very considerable degree of sensibility. Independently of the result of these experiments, by which the sensibility of the periosteum appears to be considerable, the idea, our Author observes, is sufficiently confirmed, merely by the common and well known effect which inflammation always produces on that membrane; no part of the body, when in an inflamed state, being attended with more exquisite pain than the periosteum.

SECT. III. *De Dura, atque Pia Matre.*

EXPERIMENT I. The skin and other teguments being dissected from the side of a dog's head, the trepan was applied, so as to lay the dura mater entirely bare. In this state the membrane was gently fretted with the point of a scalpel, and some degree of pain was thereby produced; but a more evident and more violent degree of it succeeded to the application of the vitriolic acid.

EXPERIMENT II. The same experiment with the preceding was repeated upon other two dogs; and in both, the most violent degree of pain appeared to be produced by the application of the vitriolic acid to the dura mater.

EXPERIMENT III. In a girl ten years of age, whose skull had been so much fractured as to render it necessary to take away different portions of it, by which a very considerable part of the dura mater was laid quite bare, the most violent degree of pain was produced at the different dressings, when, either inadvertently or by design, that member happened to be pressed upon.

With

With respect to the *pia mater*, our Author does not adduce any direct experiments in proof of its sensibility; but as the external covering of the brain, the *dura mater*, is evidently possessed of a considerable degree of sensibility, and, as he supposes the *pia mater* to be equally well furnished with nerves, he therefore thinks it extremely probable, that it must possess no small share of sensibility.

#### SECT. IV. *De Pleura & Peritonæo.*

EXPERIMENT I. The pleura of a horse being laid bare, and the animal being again sufficiently quiet after the terror occasioned by the dissection of the teguments and intercostal muscles, such a degree of pain was produced, merely by touching that membrane with the point of a finger, that the horse jumped as if he had been convulsed.

EXPERIMENT II. On repeating the same experiment upon a dog, the distance between the ribs was too inconsiderable to admit of the intercostal muscles being properly separated from the pleura; in order, therefore, to prevent all manner of fallacy from any muscular fibres remaining un-

divided, the point of a scalpel was pushed into the cavity of the chest, and afterwards made to press back and rub upon the internal surface of the pleura ; and even in this manner such a degree of pain was produced, as made it almost impossible for four people to retain the dog in his place.

EXPERIMENT III. The same experiment being repeated upon other two dogs, the result was found to be the same.

EXPERIMENT IV. The teguments and muscles of the abdomen in a dog being cut open, by an incision along the course of the linea alba, the peritonæum was thus laid bare ; and as soon as the animal had recovered from the fright he had been put into, the peritonæum was slightly touched with a piece of timber wet with oil of vitriol. He instantly thereafter began to breathe and moan so strongly, that a rupture was produced in the peritonæum, at which all the intestines were immediately protruded.

EXPERIMENT V. The same experiment with the preceding being repeated, not only in a dog, but in other animals, was uniformly found to be attended with a similar result.

Our Author however acknowledges, that these experiments upon the peritonæum were by no means

means so conclusive as those upon the pleura and other parts before related ; for this membrane being so very thin and delicate as to burst very soon after the application of the caustic, its effects were thereby rendered less obvious than otherwise they probably might have been. Upon the whole, however, he concludes, that the tendons, periosteum, pericranium, dura mater, and pleura, appear evidently to possess a very considerable degree of sensibility.

### III.

*Observations on the different Methods of Treating the Venereal Disease. By William Dease, Surgeon to the united Hospitals of St Nicholas and St Catharine, Dublin.*

**A**S the Work now before us is divided into different sections, we shall here give a general account of their contents, and shall afterwards select from each of them such parts as appear to be of most importance.

The introduction exhibits a view of the opinions of the most respectable authors on the treatment of the venereal disease.

SECT.

SECT. I. Contains a general description of the venereal disease, and its propagation.

SECT. II. Treats of a clap, and the method of curing it.

SECT. III. Of the inflation of the penis, phymosis, and paraphymosis.

SECT. IV. Of the swelled testicle.

SECT. V. Of buboes.

SECT VI. Of the venereal strangury ; and

SECT. VII. Of the confirmed pox.

Mr Dease having, in the first section, given a general description of the venereal disease, proceeds in the next section to the consideration of the clap and its treatment. It has been advanced, he says, by many respectable authors, particularly by Astruc, Van Swieten, and Fordyce, that in cases of clap, the running proceeds from an ulceration either in the cells of the urethra, Cowper's glands, the prostate gland or vesiculæ seminales ; but our Author is of a very different opinion, for on dissecting the bodies of such as actually died with a running upon them, he never found that any of these parts were affected in the manner which those authors describe, the disease appearing to consist solely in an abrasion of the natural mucus of the urethra, produced either by  
an

an excoriation or inflammatory affection of the membrane lining the passage.

The principal difference in claps, he thinks, depends on the degree of inflammation which occurs ; and he asserts from experience, that those claps which, in the beginning, are attended with a smart degree of inflammation, are commonly more easily cured than those wherein the inflammatory symptoms are more trifling.

In the first or inflammatory stage of a clap, the treatment here recommended rests entirely on a plentiful use of diluent drinks, which, by increasing the quantity of urine, answer better, we are told, than any injection, for clearing the urethra of the matter collected in it : The patient, at the same time, is desired to bathe or foment the parts affected very frequently ; he must also, however, take care to keep his belly easy by any of the cooling purgatives. General blood-letting, as advised by many in this stage of the disease, has never, by our Author, been found necessary ; and he exclaims greatly against the use of opiates, having uniformly found that they rendered patients much worse after the temporary ease, which they commonly procure, was terminated.

Our

Our Author is by no means a favourer of those irritating injections, which of late have been so commonly recommended in this disorder ; the only injection he advises, is a mercurial solution, wherein crude mercury is suspended in some watery medium, by means of gum Arabic. By the use of this injection, at the same time that the patient is put upon a gentle course of a mild mercurial pill, the disorder, we are told, will in general be very much shortened ; and we need be under no apprehensions, our Author remarks, of thus prematurely suppressing the running, or of laying the foundation for callosities, or strictures ; for this injection, he says, possesses no astringent quality, but specifically, as it were, heals any excoriation with which the membrane of the urethra may be affected.

For the cure of a gleet, our Author recommends sea-bathing, chalybeate waters and tonic remedies in general, with abstinence from excessive venery, at the same time that a suitable regimen is to be attended to ; but when it so happens that a gleet or running is kept up by an ulcer in the urethra, we are then desired to have recourse to bougies.

In

In the phymosis, when the patient is young and plethoric, the skin hot, and the pulse quick, blood-letting, our Author thinks, will be advisable ; but he does not recommend the practice in any other circumstances of the disorder. He rests the cure chiefly on fomenting the parts frequently with any common warm fomentation, in which a considerable quantity of Goulard's extract of lead has been mixed. Where the pain is so violent as to prevent rest, a paretic is advised at night, and the patient is directed to have three or four stools daily. All local mercurial preparations are desired to be avoided, for even the mercurial ointment rubbed upon the parts, exasperates amazingly every symptom.

In order to prevent any matter from lodging between the prepuce and glans, frequent injections are recommended of linseed-tea and Goulard's extract ; and by attending properly to this circumstance, it very rarely happens, he observes, that we need have recourse to the operation of laying the prepuce open.

In the paraphymosis, the same antiphlogistic course is recommended as for the phymosis ; the operation of laying the stricture completely open, very seldom, if ever, becomes necessary ;  
but

but two small incisions being made on each side of the frænum with a lancet, in some cases, we are told, do service.

In the treatment of a swelled testicle, a speedy resolution, our Author remarks, should be our chief object; and as a premature suppression of the running is the most general cause of this complaint, nothing therefore should be neglected which can in any degree contribute to its return.

As the sudden suppression of a running in cases of clap, depends most frequently on the symptoms of inflammation running very high, the most effectual remedies for inducing a return of the discharge, are blood-letting, gentle laxatives, a slender regimen, rest of body, and the plentiful use of diluents.

When treating of buboes, Mr Dease observes, that from whatever cause they proceed, whether from an absorption of matter in cases of chancres, or from a premature suppression of a venereal running, in every event, if they can be brought to a laudable suppuration, it will much facilitate the easy expulsion of the virus, and abridge the cure.

In such cases, again, where buboes do not come kindly forward to suppuration, and where the glands remain hard and indolent, it contributes much, he says, to their discussion, that mercury be made to pass immediately through them, which he advises to be done by rubbing the thigh and leg of the affected side with mercurial ointment.

Our Author now proceeds to the consideration of the venereal strangury, a symptom more to be dreaded, as being attended with more pain and danger than almost any other that occurs in this disorder.

The several causes of this complaint may be reduced, Mr Dease observes, to the following : Carnosities or caruncles ; constrictions in different parts of the urethra, from the callous cicatrices of former ulcers ; enlargement of the urethral glands, that serve to separate the mucus, generally attended with a varicose state of the vessels ; callous or fungous ulcers seated about the excretory ducts of the prostate gland, vesiculæ seminales, and urethral glands ; an enlargement of the veru montanum ; and, *lastly*, an enlargement of the prostate gland itself.

After various remarks on these different causes of the disease, he proceeds to observe, that  
for

for the cure of all of them, practitioners unanimously have recourse to the bougie, a variety of forms for which may be found in most authors who have treated on this subject. But all of them, our Author observes, are liable to one capital objection, which is, that unless where the obstacles in the urethra are such as oppose but a slight resistance, as the bougies do not possess a sufficient degree of elastic firmness to prevent them from losing their form, if we attempt to introduce them beyond any considerable obstacle, they bend. Or if they be insinuated by force any way through the stricture, it is in a tortuous manner, so that upon extraction the end appears broken and twisted like a cork-screw. This, he says, is of great disadvantage, as it excites much unnecessary pain, without answering our intention.

To obviate the consequence of these defects, Mr Dease has, for many years past, formed his bougies on cat-gut of a proportionable thickness. This, he says, procures us all the advantages derived from their possessing a proper degree of firmness and flexibility, without any danger either of their breaking or becoming twisted; and their introduction is at the same time attended

tended with less pain than that of the common bougies.

With respect to the composition of the bougie plaister, it ought to be adapted to our intention of procuring a suppuration, or of healing the parts affected. Bougies, therefore, may be distinguished into suppurative and epulotic, and the following forms are recommended by our Author.

For the suppurative; Two ounces of old diachylon, one ounce of mercurial plaister, and half an ounce of crude antimony, finely levigated.

For the epulotic; Melted wax, a pound; Goulard's extract of lead, two ounces; or,

Half a pound of yellow wax; olive oil, one pound; red lead, finely levigated, ten ounces; melt over a slow fire, and boil them to a proper consistence.

At the same time that the patient is put upon a continued and prudent use of these bougies, Mr Dease recommends it as the safest practice, almost in every case, to advise a course of mercury, so as to secure, with as much certainty as possible, a total extinction of the venereal virus.

In the treatment of a confirmed pox, we are desired by all means to introduce the mercury

C

intended

intended to be used, in the most gradual manner; and not to endeavour at once to throw a great quantity of the medicine into the system. Such a quantity, however, ought at last to be introduced, as to keep up a moderate spitting, to the extent of two or three pints or so, in the 24 hours; for as mercury, when left to its own natural course, always tends to the mouth, and as it must, if once introduced into the circulation, find its way out either by the skin, bowels, salivary glands, or kidneys, our Author thinks that it is a more eligible method, and he asserts it from experience to be so, to allow the medicine to produce and keep up a moderate salivation, than to endeavour to divert its operations, as is commonly done, to some other emunctory.

In ordinary cases of lues, he recommends friction with mercurial ointment, as the best and safest method of introducing mercury to the system; but in pocky cutaneous eruptions; in cases of warts on the glans; exostosis, and enlargements of the bones, the solution of corrosive sublimate, he says, is preferable; and notwithstanding all that has been said against it, by Mr Pibrac, and various other authors, Mr Dease, from his own experience, recommends it not  
only

only as an efficacious, but as a very safe and easy remedy.

Several cases are inserted at the end of this Treatise, all tending to establish the various points of practice, in which our Author, in different parts of his Work, has ventured to dissent from those who have gone before him.

## IV.

Henr. Fridr. Delii, Prof. Erlang. &c. *Dissertatio de Taraxaco, præsertim Aquæ ejusdem per Fermentationem paratæ, eximio usu.* 8vo. Erlangæ.

**V**ARIOUS synonyms have been applied to the plant here taken into consideration, viz. taraxacum, leontodon, dens leonis, hieracium parvum, &c. and in Britain it is known by the name of dandelion.

Dandelion is one of the most common productions in this, as well as in every other country in Europe, and is accordingly well known to every botanist; but, as there are several varieties of the plant, and as the Author has given a very particular description of that species of it used in his experiments, we therefore think

it right, in order to prevent ambiguity, to copy over this part of the Work.

“ Radix fusca, ut plurimum perpendicularis,  
“ conoidea, digitum plus minusve crassa, pro  
“ ætate plantæ brevior, longior, in adultis do-  
“ drantalibus et ultra, succo lacteo amaro turgida,  
“ qui succus recens fauciatâ radice, libero aëri  
“ expositus, rubet. Per medium solidus transit  
“ sic dictus nervus, superne, neque minus in  
“ longitudine sua media, haud raro ter, quater,  
“ quinquies dividitur et subdividitur radix, ita  
“ ut quisque truncus sua folia protrudat.

“ Folia oblonga, humi procumbentia, in adul-  
“ tis obscurius viridia, immo in annosioribus  
“ magna ex parte rubefcentia ; in principio e  
“ radice surgentia, inferius quasi amplexicaulia.  
“ Lata magis costa, intus cava est, margo folia  
“ ceus. Superior et inferior superficies folii  
“ compluribus minoribus, et facile cedentibus,  
“ aculeis, prædita. Leviter lanuginosa porro  
“ sunt folia, ad utramque costæ marginem usque  
“ alte incisa. Quælibet sic multoties dissecti  
“ folii particula iterum sæpiuscule ab utroque la-  
“ tere insisa pennatimque fere divisa est, et laci-  
“ niata, in sagittæ modum desinens. Folium  
“ itidem succo lacteo amaro turget.

“ Caulis,

“ Caulis, vel si mavis, scapus aut pedunculus  
 “ cingitur in principio radicalibus foliis, surget  
 “ inter ea e radice primum tenui mollugine sti-  
 “ patus, plerumque unicus, non nodosus, non  
 “ ramosus si exceperis quod interdum duo vel  
 “ tres flores infideant cauli, hinc fiat is superne  
 “ bifidus, trifidus. Videmus etiam binos cau-  
 “ les ad latera concretos, et sic parallelatim sur-  
 “ gentes, quibus plantæ fasciatæ, quas Cl. Boeh-  
 “ merus peculiari programme nuper descripsit,  
 “ augeri possent. Cavus et fistulosus scapus, et  
 “ tenuis, et cylindraceus est, externe glaber,  
 “ longus; vidimus in pratis ulnarem, et ultra.  
 “ Si finditur secundum longitudinem, sponte  
 “ partes, elastrorum more, convolvuntur, vel in  
 “ spiras abeunt. Succum, ut radices et folia  
 “ lactem amarum continent. An scapi folio-  
 “ rumque in nervo ejusque ramis rubedo, reli-  
 “ quis omnibus partibus iisdem, peculiarem va-  
 “ rietatem efficit? vix videtur.

“ Calix duplex est. Inferior et exterior fere  
 “ foliaceus, brevior, tenuior, duodecim, ad vi-  
 “ ginti quinque usque, laciniis constans, versus  
 “ inferiora pedunculi reflexus. Superior et in-  
 “ terior tredecim vel quatuordecim, in majori-  
 “ bus ad viginti quatuor usque, seriebus seu la-

“ cini oblongis imbricatis, constat, primum in-  
 “ vicem concretis, ex antequam effloruerit flos  
 “ ipse, superne in centro coëuntibus, dein de-  
 “ hiscentibus ex explicato flore, reflexis; ubi  
 “ defloruerit, iterum arcte pappum ambeunt,  
 “ donec evoluto pappo et maturis feminibus  
 “ iterum versus inferiora reflectantur. Proxime  
 “ inferius thalamum includunt. Lacinias hæc  
 “ calicis internas et superiores minus arte squa-  
 “ mas appellaveris, cum squamatum in plantis  
 “ ea communiter sit indoles, ut altera squama  
 “ alteram ex parte tegat, e.g. in *hieraciis* qui-  
 “ busdam, *cyanis*, quod fecus se habet in nostra  
 “ planta.

“ Flos semiflosculosus est, plurimis scilicet se-  
 “ miflosculis flavis, androgynis, dense in orbem  
 “ positus, constat. Quilibet *semiflosculus* s. pe-  
 “ talum monstrat lingulam aliquam superne trun-  
 “ catam, ter quaterve leviter incisam, margine  
 “ leviter rubello donatam. Ligula hæc ambit  
 “ in inferiori et fistulosa sua parte.

“ *Stamen* quod separatum, unicum videtur, et  
 “ adhuc proprio involucro, secundum longitu-  
 “ dinem *striato*, seu vagina inclusum, superne  
 “ *capillamentum* bicornæ, et polline flavo proli-  
 “ fico conspersum.

“ Circum

“ Circum *stigma* capitatum *pappus* adhuc tener  
 “ positus est.

“ *Stilus brevis* cum *germine* recente, pistilli  
 “ complementum constituyente, continuus.

“ *Semina*, quibus, olim embryonibus, stamina  
 “ infidebant, per maturitatem brunnea complu-  
 “ ra, oblonga, scabra, e quatuor costis cardina-  
 “ libus composita, inter quæ spatium iterum du-  
 “ obus vel tribus lineolis distinctum est, ut sul-  
 “ cos referat. Costæ hæ et lineæ, per microscopium  
 “ visæ, et superiore parte sub pappo velut  
 “ unguiculi incisæ et echinatae apparent. Ince-  
 “ dunt femina

“ *Placentæ*, seu thalamo nudo punctato. Su-  
 “ perne femine unicuique adfidet.

“ *Pappus* in longiorem stipitem exprorectus,  
 “ qui stipes nihil aliud quam ipse stylus est, elon-  
 “ gatus ab ipso femine, pappum ipsum in apice  
 “ ferens, in plura filamenta stellatim vel umbel-  
 “ latim dispositum.

“ *Semina* hæc papposa natura vento late ubi-  
 “ que sparguntur. Terræ autem commissu,  
 “ post octo circiter dies protrudunt duo folia  
 “ feminalia ovata, seu

“ Cotyledones, prout vocantur. Tertiam et  
 “ quartum foliolum, jam in margine non am-

“ plius integrum, sed quinque vel septem ac-  
“ minibus gaudet. Quintum et sextum incisum  
“ pluries est, et jam lacinatum folia subsequenter  
“ profundius, jam et latius incisa sunt, donec re-  
“ liqua per ætatem eam formam adquirant quam  
“ supra descripsimus. Altero demum anno plan-  
“ tula ad perfectionem tendit, floret, ex quo  
“ tum tempore perennis evadit.”

To this accurate description of taraxacum, various experiments are added, which were instituted with a view of discovering the most effectual mode of obtaining the medicinal virtues of the plant; and upon the whole, our Author concludes, that the best method of exhibiting it as a remedy, is in the form of a vinous distilled water, obtained in the following manner.

To four pounds weight of the recent herb, properly bruised, an equal quantity of best Francfort wine was added; and a fermentation being induced, about a pound weight was obtained by distillation, of a vinous, spiritous, grateful, fragrant water, of somewhat a milky tinge.

The process being farther continued, a considerable quantity came over, of a weak, limpid, fragrant water; but this part of the produce was not supposed to contain so much of the medicinal

nal

nal virtues of the plant as the vinous spirituous water.

This remedy is here highly extolled by our Author, in every disorder where saponaceous, attenuating, or resolvent medicines can be of use; particularly in asthmatic disorders, in coughs proceeding from obstructions of the glands; and its powers in all hydropic affections, we are told, are very remarkable.

In support of this assertion, the case of a young lady is particularly related, who, for a considerable time, had laboured under an ascites; which, at the same time, was attended with an anasarcaous swelling over the whole body. All the usual remedies having been tried without any advantage, and the disease daily continuing to advance, no hopes of a recovery were left; but the remedy now under consideration being at last had recourse to, great quantities of urine were thereby evacuated, the swelling subsided, and a total recovery was at last effected. It was given to the extent of four, six, and sometimes eight ounces in the 24 hours.

Our Author does not pretend, that the diuretic powers of taraxacum is a new discovery; for so remarkable are its effects in promoting urine,  
that

that in some districts, he observes, it is known by the appellation of *lectiminga* or *pisse en lit*.

## V.

*Observations on the Cure of the Gonorrhœa. By Samuel Foart Simmons, M. D. F. R. S. &c. London.*

**A**S Dr Simmons here confines himself to the consideration of the gonorrhœa, such symptoms only are taken notice of as are supposed to be mere local affections, and unconnected with any general infection of the system.

It has of late been asserted, that gonorrhœa and lues venerea are different affections, originating from two distinct species of virus. Our Author, however, is of a very different opinion, and it would be happy for mankind, he observes, if the idea was well founded ; but unfortunately, every day's experience, in his opinion, shews it to be erroneous ; for it has been proved, he alleges, that the matter of a chancre introduced into the urethra will generate a gonorrhœa ; and that the discharge of a gonorrhœa will produce a chancre, bubo, and lues.

Two

Two cases are here related, in which poxes seemed evidently to be induced by the discharge in gonorrhœa being suppressed by the use of astringent injections, and from which our Author thinks we may safely infer, that the matter of a gonorrhœa, absorbed and carried into the system, may generate all the symptoms of a confirmed lues. That it may produce this effect, however, he thinks it may perhaps be necessary, though it is by no means certain, that it should be taken up from an ulcerated surface.

Our Author, after giving a very accurate description of the progress of the disease, and of its usual symptoms, proceeds to treat of the cure.

There are practitioners, he remarks, who, supposing that the body possesses powers to expel the virus, and that the disease has a certain period to run, are for leaving the cure to nature; or at least, content themselves with assisting her by an antiphlogistic regimen, gentle evacuations and the like.

That in many cases the disorder admits of a natural cure, there can be no doubt; the increased secretion of the mucus carrying off the virus faster than it is formed, till at length the infection is wholly removed. But it is equally  
certain,

certain, Dr Simmons observes, that in every case, by the application of suitable remedies to the inflamed parts, we may shorten the duration of the complaint, and abridge the sufferings of the patient, with the same certainty and safety as we are enabled to remove the effects of an ophthalmia, or any other local inflammation, by proper topical applications: He at the same time allows, however, that occasional blood-letting, a cooling diet, the liberal use of diluting liquors, and mild purges, are frequently used, and even necessary.

The topical remedies here recommended, consist of different sorts of injections, the ingredients of which are extremely various; but their modes of operation, Dr Simmons remarks, may be referred to their mucilaginous and sedative, or to their detergent, stimulating, and astringent qualities. In the hands of skilful practitioners great advantages, he thinks, may be derived from the use of these remedies; but, on the other hand, an improper and unseasonable application of them may prove a source of irreparable mischief to the patient.

Such injections only as will tend to lubricate the surface of the urethra, and to counteract and destroy the stimulus of the virus, ought to be  
used

used in the first stages of the disease; and by degrees, as the inflammation abates, we are desired to add some mild astringent preparation to a mucilaginous and sedative injection, taking care that its astringency be suited to the state of the disease, and to the irritability of the patient.

Of the various forms of astringent injections made use of by practitioners, our Author gives the preference to mercurials; for they are all, he observes, possessed of more or less astringency; and it is to this property we are to ascribe their effects, the idea of their correcting the venereal virus having been originally introduced upon mistaken principles. Calomel mixed with the mucus of a gonorrhœa, has no more power, he thinks, in destroying the infectious properties of that mucus than ceruse, or any other astringent preparation; and a diluted solution of sublimate injected into the urethra, will, like a solution of verdigrise or blue vitriol, constrict the mouths of the lacunæ; but this is all that it will do, for it will never lessen the infectious nature of the virus.

As gonorrhœa is very often a local affection, it may be imagined, our Author remarks, that the internal use of mercury is unnecessary towards

wards a cure. When the infection has been slight, and the inflammation and other symptoms trifling, he has indeed ventured to proceed without the use of mercury, particularly in weak, relaxed, irritable habits; but, whenever the discharge is violent, the inflammation considerable, or the seat of the disease high up in the urethra, a course of mercurials, he thinks, is always advisable.

When treating of the hernia humoralis, or swelled testicle, this symptom, our Author remarks, has been usually supposed to be occasioned by a translocation of the morbid matter to the testicle, from the too sudden stoppage of the discharge of a gonorrhœa. Dr Simmons, however, we find, has adopted a different idea, and which Dr Monro, in his public lectures has for many years past endeavoured to inculcate; *viz.* that in all such instances, the swelling of the testicle is merely the effect of irritation, and of increased inflammation. There are no passages, he remarks, by which the morbid matter could pass from the urethra to the testicle. If it were taken up by the absorbents, instead of passing to the testis, it would be carried to the groin, and there produce buboes; and if the swelling was  
occasioned

occasioned by the matter's being conveyed into the system, and thus affecting the testicle, this gland, as being the secreting organ, would be the first diseased ; whereas we constantly find, that the swelling first begins at the vas deferens, and proceeds backwards through the epididymis to the testicle ; and, in many cases, the inflammation is entirely confined to the vas deferens and epididymis, the testicle itself not being in the least affected.

Blood-letting, suspending the testicle in a proper truss, and a horizontal posture, are recommended as the most effectual remedies. As the disease is supposed to be purely inflammatory, and altogether independent of the venereal virus, we are desired to avoid mercurials : And for the same reason drastic purges, and strong emetics, although recommended by some writers, are condemned by our Author ; and cold applications, such as cloths dipped in vinegar, are recommended in preference to warm poultices and fomentations.

The *chordee*, or painful involuntary erection of the penis, occasioned by the stimulus of the venereal virus on the inflamed membrane of the urethra, may in general be quieted by the internal

nal use of opiates, and by sedative injections ; and leeches applied near to the seat of the inflammation are likewise recommended : But there is a species of this spasmodic erection, our Author observes, which goes off and returns at times, for the space of several months, even after the inflammation has entirely subsided, and which yields more readily to a liberal use of Peruvian bark, than to any other remedy.

A *bubo*, our Author remarks, is now and then merely the effect of irritation ; but in general, it is occasioned by an absorption of the venereal virus from the surface of the urethra, or from a chancre.

In the treatment of buboes, Dr Simmons recommends the dispersion of the tumor in preference to suppuration ; not only upon the principle of saving a great deal of unnecessary pain to the patient, but from the risk of throwing infection into the system being thereby lessened ; for the large ulcerated surface, which always remains after the opening of a bubo, exposes the patient more to the effects of absorption, than can possibly happen from any small quantity of matter, originally detained in an inflamed gland, being carried into the system.

In

In order to disperse venereal buboes, we are commonly advised to rub mercurial unktion on the skin at the insides of the thighs, that the mercury, by passing through the diseased glands, may destroy the virus; but this notion, our Author remarks, is founded on an erroneous principle; for the mercury applied in this manner acts merely by its stimulus, and by thus increasing the inflammation, tends of course rather to hasten than retard the suppuration. Cold applications to the parts affected are here recommended in preference to every other; and buboes are said to have been frequently dispersed, even after matter was formed, by the use of emetics.

In opening such buboes as have come to suppuration, when they appear to have arisen from simple irritation, a slight opening with a lancet, in a depending part of the tumor, will usually be sufficient, but when the suppuration has been tedious, and taken its origin from a chancre, we are directed to lay it open by caustic. But even in the case of a buboe from a chancre, when the patient is of a good habit of body, and the tumor has matured quickly, it heals sooner, we are told, when suffered to break of itself, than it

D

usually

usually does when opened, either by caustic or the knife.

In phymosis and paraphymosis, the use of Goulard's vegeto-mineral water is recommended in a particular manner ; in general, warm applications are condemned, and we are desired to make use of no external remedy whatever, but in a cold state.

When treating of *chancres*, our Author remarks, that, in the greater number of cases, they are to be considered as local affections only, not occasioned by the venereal virus being first absorbed and carried into the habit, and then thrown out again, but merely by the inflammation and ulceration arising from particles of matter applied to the membranous surface of the glans and prepuce.

Objections have been made, our Author observes, to the cure of a chancre by topical applications, on a supposition, that if the ulcer is healed by such means, the virus will be carried into the habit, and the patient be in danger of a constitutional lues. This he believes has sometimes happened ; but it has been only in cases of large spreading chancres, and where the means of preventing infection had been neglected.

Upon

Upon the whole, Dr Simmons concludes, that as a chancre is originally a local affection, the sooner we destroy the virus in the part, the more effectually we prevent internal infection; and an effectual method of doing this is recommended, which has long been inculcated here by Dr Monro, *viz.* the application of lunar caustic to the chancre, so as not only to make the sore throw off sloughs, but to destroy the very virus which gave rise to the disease. And, in support of an opinion long ago published by Mr Bell, as well as by some others, he proceeds to observe, that if, instead of thus destroying the virus in the part as early as possible, we suffer the chancre to continue to discharge for several weeks, we are certainly exposing the patient to the danger of infection, during all that time.

On the subject of *obstructions in the urethra*, caruncles, or small fungous excrescences in the passage, are commonly imagined, we are told, to be the cause of such disorders. But our Author is of a different opinion, and supposes, that strictures or contractions in different parts of the canal, are most frequently to be considered as the origin of such ailments; and a proper use of

bougies is recommended as the most effectual mode of treatment.

The dissertation is concluded with an enquiry into the nature and cure of a gleet. When the venereal taint is effectually eradicated, astringent injections are recommended, together with the use of bark, chalybeate waters, and cold bathing, and large doses of balsam of copaiva.

## VI.

*A Treatise of Midwifery, comprehending the whole Management of Female Complaints, and the Treatment of Children in early Infancy; to which are added, Prescriptions for Women and Children, and Directions for Preparing variety of Food and Drinks adapted to the Circumstances of lying-in Women. By Alexander Hamilton, Professor of Midwifery in the University of Edinburgh, and Member of the Royal College of Surgeons. 8vo. Edinburgh.*

**T**HE comprehensive treatise of midwifery which is now before us, is chiefly intended for the use of female practitioners; and we are inclined to think, that those who bestow upon it  
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an attentive reading, will have no hesitation in allowing, that it is better fitted for the purpose intended, than any thing that has yet appeared in an English dress. A work of this kind, rendered universally and readily intelligible by distinct arrangement, and simplicity of style, has been much wanted. The work before us, however, not only comprehends the most important rules of delivery, and directions for the after treatment both of mother and child, but also gives the previous necessary instruction, in the most plain and familiar manner, divested of every term which may not be fully and clearly understood by any female qualified for the profession of midwifery. It may therefore, we think, be justly considered as a valuable acquisition to the public. To justify this character, however, we must refer our readers to the work itself: For, of a general system, we cannot propose to give a full or distinct analysis.

There can be little doubt, that the success of practitioners, in this branch of the medical art, must, in some measure, depend on a knowledge of the structure and functions of those parts which are the immediate subjects of the midwife's attention. The want of that knowledge must con-

stantly expose the patient to the hazard of suffering from the ignorance and officiousness of the practitioner, and may be considered as the source of errors in practice, which have been highly fatal in their consequences. With the view, therefore, of removing this source of mischief, the ingenious Professor very properly introduces his subject with a concise but accurate description of the bones of the basin, the shape and dimensions of its cavity, and its application to the passage of the child. He then describes the several parts of the genital system, explains their principal functions, and gives some account of generation, and of the periodical evacuation which distinguishes the sex.

He next proceeds to give a detail of the diseases arising from the irregularity of the menses. And here he observes, that while those women are most healthy who have this discharge in the most regular manner; on the contrary, those who suffer bad health, either want it altogether, or have it sparingly, excessively, or at irregular intervals. A prejudice, he observes, for a long time prevailed, that when the menstrual evacuation was diminished or suppressed, something bad was retained in the habit. This arose from an  
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erroneous opinion, that the menstrual blood was of a poisonous quality, and might by its vapour kill animals, destroy vegetables, stop fermentation and the like ; and therefore, that a woman's presence at these times was extremely dangerous ; that if she touched wine, it would immediately become sour ; if she assisted in making gellies, that they would never thicken ; at salting meat, it would be spoiled. But although he considers these as being prejudices founded merely upon superstition, and looks upon the menstrual discharge, in its natural state, as being an evacuation of pure good blood, yet he considers it as liable, not only to the diseases of the general mass, but also to acrimony from stagnating in the vagina. He thinks, however, that when the constitution suffers from obstruction, it is not from the retention of diseased blood, but from the vessels being overloaded, or from the sudden stoppage of an accustomed evacuation. And he observes, that, in general, irregularities of the monthly evacuation are oftener the effect of some thing faulty in the habit, than the cause of the bad health which at that time occurs.

He observes, that, for the most distinct view of the complaints resulting from this cause, they

may be reduced to three heads. 1<sup>st</sup>, Those about the time of its commencement. 2<sup>d</sup>, Those after the habit has been established : And, 3<sup>dly</sup>, Those about the time of its final cessation.

The first of these periods is to be viewed, he thinks, as a very critical season with females ; and he strongly recommends prudent conduct in the management of them at this time. Late hours, excessive heat, particularly by dancing, or long confinement in crowded places, ought to be prohibited in the strongest terms ; and when there is reason to expect the approach of the menstrual discharge, every thing which can discompose either mind or body is to be carefully shunned. The food should be plain and simple, taking care, particularly, to avoid gross aliment, and astringent drinks.

Under the second period, he gives directions for the management in the different cases of obstruction or suppression, of painful menstruation, and of immoderate discharge. On the first of these subjects, he is of opinion, that there is not yet in the whole catalogue of medicines, any one which can be relied upon for that purpose. He admits, however, that purgatives, especially those tending to induce tenesmus, as the aloetic purgatives ;

purgatives ; that exercise, dancing, riding, the cold bath, the warm bath, electricity, and the like, have at times been attended with the desired effect. But he remarks, that since a remedy which in one instance will prove mild, inoffensive, or successful, will in another throw the patient into the most violent nervous or hysteric disorders, medicines of this kind ought to be given with great caution. When these medicines are employed, he directs, that they should not be uniformly continued, but begun about a week before the expected return, and continued for a few days after that, if the evacuation does not previously occur. In cases of painful menstruation, he places the chief reliance on opiates, taking care, however, to counteract their binding quality by the use of gentle laxatives. And he further adds, that these measures are to be employed only on emergencies, as they are with difficulty left off.

Where an excessive menstrual discharge occurs, he is of opinion, that more in general is to be expected from regimen than medicine. Cooling diet, cool air, and cold applications, as wet cloths frequently applied to the os externum, when the flooding is excessive and dangerous,  
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are the principal remedies. And to prevent the return of the disorder, a light decoction of Peruvian bark, sharpened with elixir of vitriol, is, he thinks, more to be depended upon than any other remedy.

During the last period, or the time of the final cessation of the menses, he observes, that the symptoms which occur are extremely different, according to the constitution and circumstances of the patient. The chief affections, however, may, he thinks, be referred to the following heads.

1. Those of fulness, in consequence of the sudden stoppage of an usual evacuation in full habits. 2. Frequent long-continued or immoderate floodings, in feeble and relaxed habits. And, 3<sup>dly</sup>, General affections of the system, from an alteration of the constitution. For relieving the first of these, he recommends spare living, blood-letting at proper intervals, an open belly, and suitable exercise. Against a frequent or immoderate discharge in relaxed habits, he recommends, that the flux be checked by cold applications; that the painful symptoms be relieved by opiates; and that the constitution be afterwards strengthened, when the patient is able to bear

bear it by the cold bath. But where, even at this period, the flooding appears to proceed from fulness, he recommends proper evacuations and cooling regimen. Where general affections of the system take place, he considers them as indicating a change in constitution, requiring the aid of the most skilful and experienced of the profession, and beyond the province of the female practitioner, for whose use this Treatise is chiefly intended. And by a similar recommendation, in every case where simple and easy measures will not answer, if much good be not done, much mischief may at least be frequently prevented.

He next treats of the various local affections of the genital parts, and gives particular directions for their prevention and cure. The nature of pregnancy, which leads to an explanation of the structure of the gravid uterus, the changes which it undergoes from conception, the progressive evolutions of the ovum, the embryo and child, is the next subject of consideration. This naturally leads him to consider the diseases of pregnancy. These he has referred to three classes; 1<sup>st</sup>, The complaints, such as those of breeding, which are confined to the early stages

ges of pregnancy. *2dly*, Those which occur in the last months, arising from the straining of the womb, and its pressure on the neighbouring parts; and, *3dly*, Those which are confined to no particular period, but happen at all the different terms of gestation. Of the treatment of the different affections falling under each, he gives a very accurate and minute detail. And the subject is concluded with some important cautions for the treatment of pregnant women.

The third Part of this Treatise comprehends the management of delivery. Labour, which he defines the effort of nature to expel the child, he considers as of three kinds, natural, lingering and preternatural. Directions for the treatment in each of these cases are delivered in the most concise, accurate and judicious manner. The tenderness to patients, and regard to female delicacy, which is inculcated in these directions, cannot escape the observant reader; and the peculiar earnestness with which female practitioners are entreated to be diffident of their own abilities, and to have recourse to superior assistance, in cases of doubt and danger, but at the same time to be equally cautious of betraying timidity, impatience or distrust, which  
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may give an unnecessary alarm to the patient, if duly attended to, may be productive of the most useful consequences.

This part of the subject is concluded with directions for the management of twins or triplets. This subject, in its nature intricate and perplexing, from the variety of opinions which prevail, is explained with precision and accuracy.

The next great division of this Work respects the management of women after delivery. Here he carefully points out those errors which have been most fatal; and concisely delivers rules for treatment, suggested by common sense and a faithful attention to the operations of nature. He then proceeds to give a detail of the diseases incident to the child-bed state. Under these he considers first accidents from delivery, as swelling and inflammation of the parts, occasioned by bruises of the child, or ignorance of the practitioner, lacerations, inversion of the womb, and the like; and then, diseases more strictly so called, under which he includes the treatment of faintings, floodings, after pains, inflammation of the womb, affections of the breasts, the weed, the miliary, and the puerperal fevers.

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The last division regards the management of children in infancy. And it is to be regretted, that the limits of the plan has prevented the Author from treating this interesting subject with all the minuteness that could have been wished. Here, however, he has suggested many useful advices for the prevention of those diseases to which the fatality of infancy may be imputed. These are considered under the articles of cleanliness, clothing, purging, nursing, air and exercise.

The diseases themselves are then shortly treated of in the following order. 1. The accidents occurring immediately at birth, or soon after, as those arising from original malconformation, external injuries, and the like. 2dly, The internal diseases, as the red and yellow gum, sickness, vomiting, gripes, sore mouth, teething, &c. On each of these subjects, although his observations be short, yet they are perspicuous, and may have considerable effect in preventing improper treatment.

The Work is concluded with remarks on the qualifications which female practitioners ought to possess, and with directions for preparing food and drink adapted to the circumstances of lying-in

in women, which may render this Work not only a valuable acquisition to the female practitioner, but also to the intelligent mother and the careful nurse.

## VII.

*An account of a Method for preserving Water at Sea, from Putrefaction, and of restoring to the Water its original Pleasantness and Purity, by a cheap and easy Process: To which is added, a Mode of impregnating Water in large Quantities, with fixed air, for medicinal uses, on board Ships and in Hospitals; and likewise a Process for the Preparation of Artificial Yeast. By Thomas Henry, F. R. S. &c. 8vo. Warrington.*

THE Author of this Treatise introduces his subject, by deploring the loss of such a great number of men, as in long voyages at sea, have, till of late, been uniformly carried off by scurvy. This dreadful calamity, he observes, takes its origin from putrid air, putrid provisions, putrid water, a deficiency of fresh vegetables, and want of cleanliness; but he seems to think, that as putrid water is one of the prevalent causes

les of the disorder, so a great deal may be done in preventing it, merely by a constant and plentiful supply of fresh water.

Our Author is by no means ignorant of the advantages to be derived from the mode of distilling sea-water, as lately introduced in the navy ; but this he apprehends is only intended to furnish a partial supply of fresh water in cases of necessity ; and that it must be altogether insufficient for the consumption of a large crew ; whereas, his scheme aims at the constant preservation of water from the putrefaction to which it is exposed in long voyages.

A method of preserving water from putrefaction was some years ago proposed by the late Dr Alston. It consisted in adding a quantity of lime to every cask of water that substance having a strong antiseptic property, and water, as long as it retains the impregnation of lime, being never known to putrefy. But lime communicates a disagreeable taste to water, and, abstracted from that inconvenience, it might perhaps in many instances be detrimental.

To free the water, at the time of using it, from the lime, Dr Alston proposed the precipitation of the latter, by throwing into the water a  
quantity

quantity of magnesia ; on this principle, that as lime-stone is rendered soluble in water by its deprivation of fixed air, and has a greater affinity with that air than magnesia has, the particles of quick-lime would attract the air from the magnesia, and thereby becoming no longer soluble, would fall to the bottom and leave the water tasteless, and fit for œconomical purposes. Dr Alston's theory was just, but the expence attending it, owing to the price of magnesia, was such as to prevent the execution of the proposal.

A variety of experiments were made by our Author, in order to discover a cheap and easy method of precipitating the lime, so as to restore to water, impregnated with it, its original sweetness and pleasantness ; and the result of these trials has fully answered his expectations.

We are here presented with engravings of the different utensils used in this process: For a proper idea of these, we must refer our readers to the Work itself ; but a particular detail of the process we suppose will be very readily understood.

*The Method of impregnating Water with Quick-lime.*

To every cask of water of 120 gallons, add two pounds of well burnt quick-lime, either

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fresh from the kiln, or properly preserved. When the lime has been in the cask some minutes, and the heat and effervescence occasioned by the mixture are over, let the cask be stopped from any communication with the external air.

*The Method of freeing Water from the Lime, and restoring it to its original pure State.*

Let a cask be prepared, of a form somewhat narrower, in proportion to its depth, than usual. The top must be formed of one plank, and have a piece cut out of the centre, of a circular form, and as large as can be allowed, without weakening the sides too much. This piece, or bung, must be made to fit as closely as possible, and have an iron handle affixed to it for the purpose of lifting it, and of confining a weight which is to be laid on, to keep the bung from yielding to a small force from within. A small hole must be bored in the side of the top, which is to be exactly stopped with a plug, for a purpose to be explained in the sequel.

Fill this cask, which may be supposed to contain 60 gallons, secured on a convenient part of the deck, or slung up in the shrouds, with the lime-water drawn off clear from the sediment,

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so as to avoid any visible particles of lime floating in it; allowing sufficient room for the air-vessel, and a free space of about half an inch between the surface of the water and the top of the cask.

Let a vessel be also prepared, capable of containing two gallons, or 1-30th of the capacity of the cask. Into this vessel introduce half a pound of marble, pure *unburnt* limestone, or chalk grossly powdered, and two quarts of water. Then pour gradually on these, three ounces of strong vitriolic acid, commonly called oil of vitriol, and stopping the mouth of the vessel with a tubulated stopper, let it down by means of strings into the cask filled with lime-water. The fixed air let loose from the mild calcareous earth, will bubble up through the lime-water. When this has continued about a minute, the bung is to be fastened on, and a weight properly applied, so as to keep the bung in its place.

In about an hour, the bung may be removed, in order to see whether the discharge of air continues. If it has ceased, or be considerably abated, three ounces more of vitriolic acid is to be added, and the air-vessel returned to its former station in the cask.

The time necessary for precipitating the lime from the water, will be in proportion to the briskness of the effervescence ; but in general a few hours will be sufficient. Should the first parcel of calcareous earth and vitriolic acid be unequal to the sweetening of the lime-water, and no longer discharge air briskly when agitated, the contents of the air-vessel are to be poured out, and a fresh quantity of the ingredients substituted in their place.

When the water is become quite mild, the air-vessel is to be taken out, and, if the calcareous earth continues to discharge air, let it be plunged into another cask of lime-water, that there may be no needless expence of fixed air.

The specific gravity of the lime is so much superior to that of the water, that it will soon fall to the bottom of the cask, when the operation is finished. As soon as the water is become clear, it must be drawn off by a cock for use ; or, if the cask be wanted to purify other quantities of water, it may be drawn off sooner into other vessels to clarify.

The precipitated lime may be collected, and being now in the state of chalk, and impalpably powdered, may be used instead of prepared chalk,

chalk, for the medicinal purposes to which that article is applied.

*Cautions to be observed in these Processes.*

1. The quick-lime should be chosen, as pure, free from any foreign taste, white, well burnt, and as fresh from the kiln, as can be obtained. What is carried to sea for future use, should be carefully packed up in clean tight casks, so as to preserve it from moisture and the action of the air.

2. The casks into which the lime-water is put, should be perfectly clean and sweet; and those should be selected for this use, that are well seasoned and free from sap.

3. The water is to be first poured into the air-vessel, then the calcareous earth, which is to pass through a paper cone, to prevent its adhering to the sides of the mouth of the vessel; and *lastly*, the acid is to be added, no attention being paid to the mixing the earth and water intimately. By this means the acid attacks the calcareous earth gradually, and the vessel is in no danger of bursting by the too sudden explosion of the air. For the same reason, care should also be taken that the air-vessel be not shaken too rapidly.

4. Gently agitating the upper part of the cask from time to time during the process, will accelerate the completion of it, by occasioning a quicker absorption of the fixed air; and the small plug must occasionally be taken from the hole in the top of the cask, to let out that part of the air which is not soluble in water.

5. The precipitated lime is to be cleared out of the cask after each time of using it; and the cask should be frequently washed thoroughly.

6. Care must be taken, that the mouth of the air-vessel be clear of calcareous earth, before the stopper be put in; and that the ends of the tubes in the stopper be not clogged up with any thing that may prevent the passage of the air through them.

7. Each ship should be provided with several of the air-vessels; and each vessel should have two or three tubulated stoppers adapted to it; the vessels and their stoppers to be marked with similar numbers.

8. The size and number of the purifying casks must be in proportion to the rate of the ship, and the convenience with which they can be managed.

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9. If the cask be left with the air-vessel in it during the night, or for any considerable length of time, a smaller plug may be put into the small hole in the top of the cask, so as to leave it not quite air-tight.

10. If during the process the fixed air should escape by the edges of the round bung, it may be prevented by any slight luting, which may be easily removed when the bung is to be taken out.

11. It will be scarcely necessary to mention, that the air-vessel, and the large circular bung-hole in the top of the cask, are to be so proportioned, that the latter will easily admit of the passage of the former through its aperture.

Our Author now proceeds to communicate his method of impregnating water in large quantities with fixed air, so as to give it the properties of mineral water, for the use of the sick on board of ships and in hospitals.

Dr Nooth's glass machine, with Mr Parker's and Mr Magellan's improvements, though admirably contrived for the preparation of small quantities of artificial mineral water, is by much too small for the sickly crew of a large ship. To remedy this inconvenience, a mode is here pro-

posed, by which the same kind of process may be performed on a much larger scale ; but as a distinct idea of the instruments recommended cannot be conveyed by description, such of our readers as wish for more particular information, must have recourse to the drawings with which Mr Henry has favoured us.

By the process here recommended by our Author, a plentiful supply of this medicinal water may be had at all times, and at a very trifling expence; which may not only be a preventive against putrid disorders, but even a powerful remedy when they actually exist.

As it is a matter of importance to procure fresh fermented bread at sea, our Author recommends the following process for obtaining artificial yeast, and for making bread by means of it.

Boil flour and water together to the consistence of treacle. When the mixture is become cold, fill a small cask with it, and let it be fully saturated with fixed air, in the manner directed by Dr Priestley and others, for impregnating water. Pour the mixture thus saturated, into one or more large bottles, or narrow-mouthed jars. Cover it over loosely with paper, and upon  
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on that put a slate or board, with a weight to keep it steady. Place the vessel in a situation where the thermometer will stand from 70 to 80 degrees, and stir up the mixture two or three times in 24 hours. In about two days such a degree of fermentation will have taken place as to give the mixture the appearance of yeast.

With this yeast, when it appears to be in the above described state, and before it has acquired a thoroughly vinous smell, mix the quantity of flour you intend to make into bread, in the proportion of six pounds of flour to a quart of yeast, and a sufficient quantity of warm water. Knead them well together in a proper vessel, and covering it with a cloth, let the dough stand for 12 hours, or till it appears to be sufficiently fermented, in a degree of warmth equal to that above mentioned. It is then to be formed into loaves and baked.

Mr Henry next gives directions for preparing artificial pyrmont water, Seltzer water, and Mr Bewley's julep, in large quantities; but these processes cannot be rightly understood but by references to the different figures, inserted by our Author, of the several utensils necessary in carrying them into execution.

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The publication is at last concluded by a postscript, answering some objections which Dr Lind of Haflar hospital supposes may be made to some parts of the different processes here recommended.

The only material objection stated by Dr Lind, is, that the agitation of the ship may, in some instances, obstruct the process recommended for the purification of the water; but a method here pointed out, for suspending the different vessels used in that process, appears to be fully sufficient for preventing every inconvenience of that nature.

SECT.

## S E C T. II.

*Medical Observations.*

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## I.

*The History of a case, in which Worms in the Nose, productive of alarming Symptoms, were successfully removed by the Use of Tobacco. By Mr Thomas Kilgour, Surgeon in Jamaica.*

**A** GENTLEMAN of Montego-bay in Jamaica, aged twenty-six, of a middle stature, and robust make, about the middle of July 1777, complained for three days, of a slight obtuse pain in his right upper jaw-bone, root of the nose, eye, and forehead of the same side.  
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On the evening of the fourth day, the pain became exceedingly violent, extending through the third dens molaris, and affecting the right side of the face and head with severe and incessant shootings. He applied next morning to an assistant of Mr Thomas Brown, an expert surgeon in this place, to extract the tooth in which he felt the greatest uneasiness, imagining his complaints originated from it. The tooth was perfectly sound, and its extraction was attended with no alleviation of the pain. At night he took an opiate, but it afforded no relief.

I was desired to visit him next day. He then felt inexpressible agony and distress. The eye and right side of the face were much inflamed, but little swelled. From the right nostril there distilled, in large drops, a thin dark coloured ichor, of a very offensive smell, similar to the discharge from a carious bone, but more disagreeable. I examined the nostril, but could perceive no ulceration. I therefore concluded it must be a collection of some acrid matter in the maxillary cavity, that occasioned these violent symptoms, and that the discharge from the nose was the matter finding its passage through that way.

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The case being alarming, and the fever considerable, we called for the assistance of Dr Murray, who readily agreeing to our opinion of a collection of matter being formed in the maxillary cavity, a perforation was made into it thro' the socket from which the tooth was extracted; but no discharge of matter followed the perforation, nor did the pain in the least abate. On the contrary, it continued to increase more and more at the root of the nose; and, about an hour after the operation, there were voided from the right nostril two insects, in appearance like the maggots formed in putrid meat. On placing the patient in the light, a vast number were perceived in motion at the upper part of the nostril. I introduced a forceps, and took out three or four at a time; and, in the course of that day, upwards of thirty. They were in general three-fourths of an inch long, and one-eighth thick, composed of rings, suddenly tapering towards the tail, and had a large brownish head. In extracting, they made a strong resistance with what served them instead of feet, and gave a sensation to my hand like a file drawn across a soft body. When taken out, they were very lively, and crawled

crawled about in the open air a long time before they died.

It was supposed these insects were hatched in an ulcer of the nose, from a venereal cause, the patient being affected with a simple gonorrhœa about a twelvemonth before, which was cured in the common way, and without any return of symptoms. This being the idea formed of the disorder, after premising the necessary evacuations to moderate the febrile symptoms, a mercurial course was entered upon, both with a view of correcting the general state of the habit, and likewise from its known qualities, in being offensive to worms, to destroy the insects. Three grains of black precipitate were ordered to be given at bed-time, along with an opiate; the nostril to be frequently fumigated with cinnabar, and a solution of calomel and camphor, in oil, to be thrown up by injection.

Having a particular regard for the patient, I staid several hours with him, and was much disappointed in finding neither the fumigation nor injection to have the smallest effect in mitigating the pain, or destroying the insects. I therefore set about some experiments to find out a remedy capable of killing them, and happily, in a little time,

time, discovered one that proved successful ; but previous to this attempt, that the mercurial solution might have the fullest justice done it, I put a few of the insects into it, and found them at the end of an hour as lively as ever ; a clear proof they were not of a species to be affected by oils or mercury.

The trials I made upon them were as follow :

I took five wine-glasses ; into each glass I put two of the maggots ; into one glass, I poured a strong decoction of chamomile and wormwood ; into another, vinous tincture of opium ; into the third, rum ; into the fourth, I blew tobacco-smoke ; and into the last, I poured a decoction of tobacco.

The bitter decoction gave them no disturbance. The tincture of opium, at its first application, threw them into violent motion ; but in a short time they recovered and moved about at their ease. The rum killed them in about ten minutes. The tobacco-smoke, in a few blowings, shrivelled them to death ; and the tobacco decoction instantly convulsed and destroyed them.

Next day, by consent of Dr Murray and Mr Brown, the tobacco decoction was injected into the nostril, and the fumigation and mercurial injection

jection laid aside. The black precipitate and opiate were ordered to be continued at bed-time ; and, with a view to obviate putrefaction, and support the strength, two ounces of infusion of the bark were administered every hour through the day, and the patient indulged in a little wine, and such light nourishment as he could take. At first the tobacco decoction gave a good deal of pain ; but in a little time became pleasant and agreeable, sensibly correcting the fœtor, and bringing away the insects in great numbers, and in a very weakly state. After using it a few days, seldom more than half-a-dozen a-day were voided, and these frequently dead. At length, after a course of ten days, numbers being extracted by the forceps, and falling out of themselves, sometimes dead, sometimes alive, a white transparent substance, near two inches long, and a quarter of an inch broad, and flat, with three large insects in it, was brought out by the forceps, upon which the pain greatly abated, and from that time the insects disappeared. In a few days more the abrasions of the membrana Schneideriana were healed up, and before the middle of August, the patient was able to go to the mountains to recover his flesh.

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The above mentioned substance, I presume, had served as a nidus for these insects. On the surface of it were a great many inequalities and furrows. It is to be observed, that this young man had been subject to an hæmorrhage from the nose, from the time he arrived at puberty, till he settled in this island, about five years ago, since which time he has had no attack of it. He lost the sense of smelling by the right nostril after the hæmorrhage appeared, and has it only in an imperfect degree by the left ; nor has it returned since he recovered from this disorder. Might not this membranous substance have been formed of the coagulable part of the blood adhering about the ossa spongiosa after the hæmorrhage, the red particles of what remained stagnated in the nostril being reabsorbed ; and might not this foreign body, by its stimulus, have brought on an ulceration of the memb. Schneid. whence these insects have been generated ? One circumstance in the above case is very astonishing, *viz.* the rapid generation of these insects ; as I am confident I speak within bounds, when I assert, upwards of 200 were extracted and voided in the space of 10 days.

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It is surprising, that among all those authors who have written on the diseases of warm climates, there is no mention of maggots in the nose as a disease that sometimes occurs ; and yet I imagine it is a complaint that has pretty often come within the knowledge of practitioners ; for, since the above case, I have been informed of several instances that have happened in this island. The most remarkable is one that occurred some years ago, to a married woman of this place. Her husband, after every thing had been tried in vain by the Faculty, one day when she was in the greatest agony, poured a quantity of oil of turpentine into the nose ; and this seeming to abate the pain, he continued to apply it for several days successively. The event was, the insects were killed, and the nose restored to the state of a simple ulcer, which soon healed up. But previous to the use of the turpentine, the unfortunate woman had lost the ossa nasi, and with this deformity she escaped.

Another case was that of a young man, a few miles from this, which happened in 1776 ; but to him it proved fatal.

Mr Robert Monro of Hanover-parish, a very old practitioner, and a man of great experience  
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and medical sagacity, informed me of a case of maggots in the nose he had met with, in which, after every thing that was tried had failed, he thought of using the tobacco, from knowing its powerful effects in killing most kinds of vermin. The consequence was, the insects were speedily destroyed, and the patient in a little time restored to health. And this fact of Mr Monro's, who was also called upon to visit our patient, was what induced us to persevere in the use of the tobacco, which happily proved so efficacious.

## II.

*Account of a New Method of Treating Dropsy. By Mr John Ring, Surgeon, New Street, Hanover-Square, London ; communicated in a Letter to Dr Duncan.*

**I**N compliance with your request to practitioners in general, to transmit to you any improvements made, or supposed to be made, in the art of healing, I have subjoined three cases, to recommend what I believe to be a more successful method of treating the dropsy, than those

usually pursued. Every instance in which I have yet tried it, has confirmed me in that opinion ; but as the following were the most alarming cases, I thought it would be intruding too much on the limits of your publication to trouble you with more. If, from these hints, the least advantage should accrue to any afflicted with that disorder, my intention will be fully answered.

Case 1st. W. R. Esq; was seized, in February 1778, with an anasarca, which increased so fast, that I apprehended considerable danger, as he was 84 years of age. It was occasioned by a fit of the gout, which had relaxed him extremely, and I feared would render him unable to support the necessary evacuations. Having, in many cases, seen the uncertainty of diuretics, I gave him a purging draught, which reduced the swelling ; and, on account of his weakness, did not repeat it till the third day, by which time his legs, &c. were swelled to their former size. Finding no ground was gained, I interposed a draught, consisting of tinct. amara, acet. scillit. &c. to be taken twice a-day on the days free from purging. The acet. scillit. kept up a diarrhœa, and excited  
nausea

nausea, on which account I substituted in its stead the following draught :

Rx. Decoct. cort. Peruv. fort. unc. ff.

T. cort. Per. Hux. dr. iii.

Ol. Juniper. gut. iv. M. ft. haustus, meridie et nocte fumendus.

From the time of taking this medicine, his appetite was immediately restored ; the waters no longer increased on the intermediate days, and by the occasional repetition of the purge, were in a short time entirely removed. As the draught rather occasioned costiveness, a few grains of rhubarb were sometimes joined with it ; and after the waters were evacuated, the draught, omitting the ol. Juniperi, was continued for some time. He has remained in perfect health ever since, except now and then a languor, for which he has recourse to the same medicine, and never without effect. It may not be improper to observe, that frictions of the legs were recommended in this and the second case ; and in the last, of the abdomen ; together with abstinence from liquids, as much as convenient in them all.

Case 2d. Mrs F. aged 44, having been exposed to the rain at the time of her menses, they suddenly stopped. Her abdomen immediately

F 3

began

began to swell; and, in the space of a week, when I first was sent for, (Sept. 6. 1778,) an anasarca had diffused itself through the whole system, to a great degree for so short a time. Her body was increased above six inches in circumference, and her legs to twice their natural size. I directed for her a draught with *El. e Scammon.* by which the waters were much diminished; but in two days, at which time it was repeated, they were collected again to their usual quantity. The second draught did not agree so well as the first; it produced more pain, and less discharge; nevertheless her strength was much exhausted, as her stomach was too weak to bear any animal food but broth. The third draught was intended to be given at three days distance; but before that time, she was seized with so violent a pain of the bowels, that an anodyne was necessary, which removed it. After waiting a few days, for fear of too great irritation, I changed the drastic purge for one of a lenitive kind, as *inf. Senæ, &c.*

After taking five cathartics, no advantage could be perceived, as the waters, after the evacuation, soon increased again, so that we almost despaired of success. I did not think myself warranted

warranted, by the former case, to give the bark in this, on account of the great quantity of waters, till I had tried diuretics, with the usual corroborants, as *inf. amarum*, *sal tartari*, *ol. juniperi*, &c. ; but, after giving them for ten days between the days of purging, and finding no other effect but that of raising a fever, I ordered a saline mixture, which presently removed it, and afterwards the bark, &c. as in the former case. The event answered my wishes; her appetite grew strong; the waters no longer increased; and, by the assistance of a purge now and then, which she bore well, her disorder was soon removed, and has never returned since.

Case 3d. Mrs N. who had several children, sent for me when she thought herself in the sixth month of her pregnancy, and desired my advice concerning bleeding; as, although she believed herself to be with child, the menses regularly appeared in a small quantity. I did not find the least occasion for bleeding; her pulse being low, and every thing indicating great relaxation; and I expressed some doubt of her pregnancy; but she herself seemed positive of its reality, from her regularly increasing in size; and was more confirmed in it as it advanced, by

thinking that she frequently felt the child move. Her labour not happening when the usual term of gestation was elapsed, I proposed an examination, to ascertain her true state; and was confirmed in my conjectures, that the tumour was an hydrops ovarii.

I directed for her, (Oct. 29. 1778,) a purging draught, and two days after repeated it; then gave her a mixture of inf. amarum, sal tartari, and ol. juniperi; as I wished to prove, by a sufficient number of cases, whether my want of success before with that medicine was owing to its inefficacy, or to any peculiarities in those habits where it had been made use of. She complained that it occasioned great heat in her stomach, and no good consequence whatever ensued, to recommend its continuance. As she was much weakened by the former evacuations, the cathartic was not repeated till the fourth day; and immediately after, I directed a mixture of the strong decoction of bark, Huxham's tincture, and oil of juniper; three large spoonfuls to be taken noon and night, on the intermediate days. The cathartics were repeated every four or five days; and, to remove costiveness, two pills at night occasionally, of equal parts

parts of pil. cocciaë, and pil. rufi. Before the end of December, the tumour was perfectly removed, and her strength almost established. From the time she began the bark, she supported the evacuations with ease, and the tumour never increased ; but did not subside very perceptibly, unless from the cathartics. The pills were continued for some time, to remedy costiveness, which went off as her strength was, by exercise, more restored. Her complaint has not since returned, and she is now advanced near seven months in pregnancy.

The inferences I would draw from these observations, are, 1<sup>st</sup>, That in dropfies, where no particular symptoms, as inflammation of the viscera, &c. forbids it, we ought early to interpose bracing medicines, between the use of cathartics : And, 2<sup>dly</sup>, That with this intention, no medicine is equal to the Peruvian bark.

## III.

*An Observation on opening the Abdomen and Thorax of a Young Lady, who died after a very short illness; communicated to Dr Duncan, by Mr Richard Paxton, Surgeon at Maldon in Essex.*

A LADY, in the 23d year of her age, of a delicate frame of body and weakly constitution, had, for two years past, complained of a slight pain on the right side of the thorax, attended with some restriction in breathing and a tickling cough; which symptoms rendered her extremely averse to any kind of exercise. About the latter end of August 1780, she was seized with the symptoms of an autumnal remittent, then prevailing in the neighbourhood, which readily yielded to the usual treatment in these cases.

The first symptoms, however, still attended her; the pain in the side, and restriction in breathing, rather increasing till the 15th of December; on the noon of which day, I was again called, and found her laid on bed with the following complaints: Debilitated quick pulse, chilliness even to shivering, together with acute pain  
on

on the right side, or, as she expressed, below the shoulder, and bilious vomiting. They told me, that as she was sitting at her needle-work in her chamber, to which she had retired after breakfast, she felt, and even heard, something give a violent snap within her breast, in that part where now she described the pain to be. Her mother going into the room soon after, she exclaimed to her, she should die. I begged she might be undressed, and go to bed; which was done, and I sent her over a saline julep, meaning to visit her again in two or three hours; but ere that time was elapsed, her father came for me, and I found her stomach rejecting every thing she swallowed, and every symptom exasperated. I confessed myself totally at a loss for the cause of the appearances; but being fully satisfied of her imminent danger, entreated a physician might be sent for, which was instantly agreed upon; and Dr Steele from Witham, saw her about seven o'clock in the evening. By his direction she was bled to the amount of 12 ounces; a blister was applied to the side, &c.

The symptoms then were, in the Doctor's own words, "Difficult respiration, acute pain in  
 "the right side, just below the breast, pulse fre-  
 "quent

“quent and oppressed, increased heat, frequent  
“bilious retchings, countenance uncommonly  
“anxious : What was very remarkable, the pulse  
“not at all freer from the liberal venesection,  
“though the respiration was a little relieved.  
“My idea of the case at the time was its being  
“a formal pleuritic attack.” She passed a painful night without the mitigation of any one symptom. On the morning of next day, the Doctor found her pulse “scarcely perceptible, and uncommonly quick, continual rigors and vomitings, cold clammy sweat, &c. complained of intolerable sickness, and pain only near the pit of the stomach, with a sense of load and oppression there.” She died at two o’clock that day, or about 28 hours from the time of the seizure.

Next day, having obtained leave to open the body, it was performed the same evening in presence of, and with the assistance of three other surgeons.

The abdomen being much distended, apparently by some fluid, a perforation was made into it with a trocar, in the usual place of tapping for an ascites ; by which, however, nothing but air was let out.

The

The abdomen was then opened in the usual manner, when the stomach and intestines appeared greatly distended; which distension ceased, upon letting out the air contained in them. The stomach, liver, gall-bladder, and intestines, in every other respect exhibited a most healthy appearance; and no obstruction whatever was found in the gall-ducts, or any extravasation in the cavity of the abdomen.

The thorax was then opened, the right cavity of which was found to contain more than three pints of reddish water, with two cysts detached and floating therein; one of the cysts ruptured but not quite emptied of its fluid. The right lobe of the lungs was much compressed, so as to occupy but a trifling part of the cavity. The left lobe, the heart, and all other parts which we examined, were in a perfectly sound state, and what is very remarkable, not the least adhesion was found in either cavity.

As Dr Steele had expressed an earnest wish for the dissection, I transmitted the account to him by the earliest opportunity, and some time after received the following:

“ Dear Sir, I am much obliged to you for  
 “ communicating so immediately the particulars  
 “ of

“ of the dissection, which, though it throws some  
“ light on the immediate cause of our patient’s  
“ death, little enables us to say what might have  
“ been done to prevent it. One means only  
“ suggests itself to me, and that, from the short  
“ period between the attack and close of the  
“ scene, a doubtful one. The effusion into the  
“ right cavity of the thorax ascertained, Would  
“ an opening between the ribs, into a depending  
“ part of that cavity, have mitigated the symp-  
“ toms, or saved life ?”

S E C T.

## S E C T. II.

*Medical News.*

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THE new operation of *cutting the symphysis of the pubes*, having greatly divided the opinions of medical professors in different parts of Europe, we presume the following abstract from the second volume of Dr Leake's last edition of *Practical Observations on the Acute Diseases of Women*, cannot fail of being acceptable to many of our readers; especially as the subject is interesting, and the Author seems to have entered candidly and minutely into a discussion of the principal circumstances for and against that operation. Dr Leake introduces this subject in the following manner:

THE section of the pubes, first proposed by M. Sigault in his Thesis at Angiers, and afterwards  
by

by him successfully performed on the living body at Paris, Sept. 2. 1777, having lately much engaged the attention of Medical Gentlemen, I shall beg leave to offer some general animadversions on that new and extraordinary operation ; particularly as M. Le Roy, Professor of Midwifery, and Doctor-regent of the Faculty of Physic at Paris, who assisted him in the performance of it, was pleased to honour me with a letter and his Treatise on that subject ; and as M. Poignand the translator has thought fit to address it to me.

M. Sigault describes the section of the pubes, and proposes it as a substitute for the Cæsarian operation ; the propriety of which, as well as the objections brought against it, I am desirous to examine with attention and candour ; for little advantage can arise from opinions, where men rather contend for superiority than truth. The spirit of enquiry is only commendable when it is exerted for the improvement of science, and solely directed for the public good. But although I am inclined to think favourably of this operation, for reasons hereafter assigned, I know that nothing but time and future experience can sufficiently determine whether it ought to be rejected or adopted.

The

The structure of the parts on which this operation is to be performed, being perfectly known to every medical reader, their description, as well as that of the operation itself, would be unnecessary, especially as the last is circumstantially set down in M. Le Roy's tract, entitled, *Practical Enquiries on the Section of the Pubes*, to which I must refer him.

The following are the objections to this new operation. *1st*, That the cartilage at the symphysis of the pubes, may happen to be ossified, which would prevent its division by the knife. *2dly*, That the neck of the bladder may be wounded. *3dly*, That the space gained by the section of the pubes, may not, in a narrow pelvis, be sufficient to allow the child's head to descend through the cavity. *4thly*, That the union of the cartilage may not be affected. And *lastly*, That the internal posterior ligaments, uniting the sacrum and ilia, may be torn asunder, by dividing the bones of the pubes.

In answer to the preceding objections, *1st*, It may be remarked, that cartilage being a substance essentially distinct from bone, is never found ossified except in a preternatural state, or in old age, after the time of child-bearing is past, and

where there could be no occasion for the operation.

*2dly*, The neck of the bladder being only slightly attached to the symphysis of the pubes, by cellular membrane, and not in close union with the cartilage, there never can be the least danger of wounding it, unless the operator is unskilful and ignorant of the structure and situation of the parts.

*3dly*, The space only of one inch gained by M. Sigault from the section of the pubes, on the dead body, does not appear sufficient to enlarge the bony passage for the exit of a child's head, in a pelvis uncommonly narrow; but in the case of Mrs Brasier, M. Le Roy found a separation of two inches and a half. And as the case at the Westminster Lying-in Hospital affords incontestable proof, that, after the section of the cartilage, the bones of the pubes, without violence, receded from each other full two inches and an eighth, I have no doubt but so much additional space would in general be sufficient to let the child's head pass, even in a pelvis so preternaturally narrow, that no other means but the Cæsarian operation could be devised for its birth.

Of

Of all the causes of difficult labour, the most frequent and invincible objection to child-birth is that of a narrow or distorted pelvis; to remedy which, the section of the pubes seems more peculiarly adapted; but here we are told by some, that although the long axis of the pelvis may from thence be extended from side to side, its shortest diameter from sacrum to pubes, where additional space is most wanted, will not be increased in the same proportion, and therefore the operation cannot avail. This, indeed, at first sight, looks like a specious objection, which, if not thoroughly examined, might much depreciate the merit and advantages of the new operation. I shall, therefore, beg the reader's attention to the following circumstances, which, if clearly understood, I presume will disprove and totally set aside what has so plausibly been alleged against it. By the section of the pubes, it is now generally allowed, even by its opponents, that the space gained by the aperture between the divided bones, is nearly two inches and a half, even in the dead body, where the parts are cold and rigid, and consequently less yielding than in a living state. It will therefore follow, that as much of the occiput or hind head as is protru-

ded into an aperture at the pubes, of two inches and a half, so much precisely will be the space gained by this operation, and superadded to the short axis of the pelvis, from sacrum to pubes; and since the child's hind head, presenting at the symphysis, is much smaller in diameter than the head itself, so much greater will be its projection into the aperture; and therefore, the space gained from sacrum to pubes, will be equal to the enlargement of the pelvis from side to side; which is the circumstance here contended for, and what we presume is fully proved, contrary to the assertion of those who have opposed the new operation.

*4thly*, From the observations and unquestionable authority of Petit and De La Faye, we are assured, that cartilages will as firmly unite after division, as bones after a fracture. But, to put this matter out of all doubt, Camper, a Dutch physician, made experiments upon a quadruped, by cutting through the cartilage of the pubes, and, after dissecting the parts, he found, they were firmly united.

*Lastly*, Respecting the pretended laceration of the internal posterior ligaments of the pelvis, uniting the sacrum to the ilia, I must refer to the  
case

case at the Westminster hospital, already recited, where the section of the pubes was made in the presence of 16 medical Gentlemen, and where, notwithstanding the space gained was two inches and an eighth, no laceration, or the least marks of violence, appeared; but, on the contrary, these ligaments were found perfectly firm, and in their natural state. If so much space could be obtained without laceration in the dead body, where the fibres were cold and rigid, and their cohesion considerably weakened by natural tendency to dissolution; how much greater space might reasonably have been expected in the living subject, where the solids are more soft and yielding?

Let us now take a comparative view of the Cæsarian operation, for the success of which Rouffetus contends with so much zeal, whilst Marchant condemns it as highly dangerous, and informs us, that Pare, Guillemeau, Viard, and others of the first rank in their profession, found this operation extremely unsuccessful.

In the 4th volume of the London Medical Observations, may be found a case of Cæsarian operation accurately related, and the only instance that I know of, where it was performed upon

the living body, in this great city, for upwards of a century past. From this case, as one which may be depended upon, I have transcribed the following particulars, being the leading circumstances, and most material practical facts relative to the nature and event of that operation.

The Cæsarian operation was performed on Martha Rhodes, Oct. 21. 1769, by Mr Thomson, surgeon to the London Hospital, who informs us, that the patient did not lose more than four ounces of blood, though she died about five hours after. The body being opened, grumous blood, which was computed to weigh about 20 ounces, was found on the surface of the omentum and uterus. The cavity of the womb also contained blood; so that the whole quantity of this vital fluid, lost by the operation, was allowed to be 30 ounces. Mr Thomson says, it is well known, that in natural labours the discharge of blood will often much exceed that quantity; and therefore seems at a loss to form a judgment what might have been the immediate cause of this patient's sudden death.

From this last opinion I must beg leave to differ; but even admitting the quantity of blood discharged in a natural labour to be considerable,

as it sometimes is, the danger should not be estimated simply by its quantity, but by the short space of time in which it is discharged, as well as the nature of the blood itself, and the source from which it is derived.

After delivery, the blood is very slowly evacuated from the innumerable small vessels proceeding from the womb, and entering the cellular substance of the placenta, for the immediate service of the child ; respecting the mother, this blood may therefore be looked upon as redundant, and not essential to the support of her own body. On the contrary, in the Cæsarian section, where the large dilated arteries and veins of the womb are divided, and 30 ounces of vital blood, or that merely maternal, suddenly gushes forth in a full stream, I am inclined to think that so powerful a check to the circulation, may suspend the heart's motion, and prove the immediate cause of the patient's death, by producing a mortal syncope ; particularly when we consider, that the hypogastric arteries entering the uterus, proceed from large branches of the aorta, through which the blood circulates with extreme velocity.

But could we suppose the patient might escape a mortal hæmorrhage after this operation, would not the large quantity of grumous blood extravasated in the cavity of the belly, from which it could not be evacuated, corrupt and destroy the contiguous vital parts, and prove the remote cause of her death?

The section of the pubes, which allows the child to be born by the natural passage, carries not with it those ideas of cruelty which attend the Cæsarian operation, where the patient is, as it were, embowelled alive. No formidable apparatus is necessary; the section being made with expedition, and without pain or danger, no blood-vessel, nerve, or other parts essential to life, are wounded; these divided, being only skin, cellular membrane and insensible cartilage, from which neither hæmorrhage, or symptomatic fever, are to be apprehended.

These are my reasons for preferring the new operation, by which the mother and child may probably both be saved; but where the mother at least, to whose safety our principal attention should be directed, would generally be lost by the Cæsarian section.

To

To those who vaguely give it as their opinion, that this operation will not succeed, the answer is short ; it has already succeeded, and therefore it may again succeed, particularly with such as are disposed to give it a fair and judicious trial.

M. Le Roy gives several examples of its success. M. Despree, surgeon in Brittany, performed the section of the pubes with happy event in 1778 : And Mons. de Lambon, first surgeon to the Dukes of Lorraine, in a letter to Mons. de Brambilla, lately published at Mons, informs him, that he had performed the section of the pubes on two patients with success ; one of which submitted to the operation twice, and is now in perfect health, as well as her child, of which she was happily delivered by the second operation.

My ingenious friend, Dr Hausman of Brunswick, who did me the honour to number himself among my pupils, also obliged me with a manuscript account of this operation successfully performed by Professor Siebold.

To conclude : Respecting the case of Mrs Sou-  
 chot, upon whom the section of the pubes was  
 first performed by M. Sigault, such was the  
 event, that both the mother and child were pre-  
 served. The circumstances appeared so extraor-  
 dinary,

dinary, that Commissioners were appointed by the Medical Faculty of Paris, to examine into the state of the case, and success attending it; in consequence of which, the honour of prize medals was conferred on M. Sigault, as well as M. Le Roy, who assisted him in the operation."

To this Work of Dr Leake, which is dedicated to the Queen, and which has been translated into the French and German languages, is now prefixed a portrait of the Author. It contains also additional observations on the use of camphor in child-bed fevers, and an account of a new and successful method of treating uterine hæmorrhages. Of these we propose to give some account in a future number.

To these observations on the section of the symphysis pubis, we may also add, that it has of late been successfully performed in Spain, by Signor Canivell, Surgeon Major to the naval hospital at Cadiz.

\* \* \* \*

The following account of the successful treatment of the Hydrocephalus Internus, by means of the Vapour Bath, is extracted from a letter  
written

written by Dr A. Hunter, Physician at York, to Dr Will. Hunter, Physician to the Queen.

“ A child, in the third year of its age, was afflicted with the hydrocephalus internus in a most alarming degree ; and as various remedies had been unsuccessfully used, a trial of the Vapour Bath was at last recommended, not from any just reasoning upon the case, but rather from a desire to cultivate a forlorn hope. Not being at that time much acquainted with the nature of the Vapour Bath, I gave it as my opinion, that the operation would prove fatal to the child, imagining, that the sudden rarefaction of the fluids would increase the pressure upon the brain, already diseased by accumulated weight. But when I found that the friends of the child had determined upon the trial, I submitted my judgment to their resolution ; and the child was accordingly placed in the fumigating chair, with anxious fears on my part. The first operation was continued for the space of seven minutes ; and, as the child bore it well, and seemed rather better on the succeeding day, I felt myself encouraged in the prosecution of the fumigation. I accordingly recommended it to be continued every other day ; and, at the expiration of 20 days,

days, I speak it with astonishment ! every symptom was diminished. The child could then view objects with pleasurable attention ; could articulate a few words, and, with a little assistance, could walk across the room ; whereas, before the fumigation, it had lost its speech, its eyes wandered without design, its apprehension was almost annihilated, and its limbs were unable to support the weight of its body. The cure being performed in the spring, I recommended sea-bathing during the summer months, which fully answered the purpose of giving additional strength. And here it will be necessary to observe, that seven grains of Peruvian bark, given twice a-day, was the only medicine prescribed during the course of fumigation ; and that was exhibited with a view to increase the absorption of the extravasated fluid.

The Vapour Bath, when highly impregnated with stimulating aromatics, occasions a sudden redness of the skin ; a temporary fever is brought on, and a copious perspiration is produced, which usually terminates as soon as the patient is dressed. From these appearances, we may rationally account for the absorption of water preternaturally collected in the ventricles of the brain.

This

This being a solitary case, we must not give our hopes too much indulgence: Let it therefore only be considered as fair ground for future experiment. I could say a great deal in favour of the Vapour Bath, in the cure of a variety of diseases, having, since the above case, had a considerable degree of experience in that mode of practice: But, as I wish to confine this letter to the successful treatment of the hydrocephalus internus, I shall leave the subject for the present, and content myself with the general recommendation of a practice that seems to deserve our serious attention."

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Some Gentlemen, at Stockholm in Sweden, have lately begun to publish a Medical Journal, to which they have given the name of *Weckoskrift for Lakare och Naturforskare*, i. e. Weekly Papers for Physicians and Naturalists. The Editors have proposed to confine themselves as much as possible to Swedish Medical and Philosophical discoveries; yet, as these will probably not afford sufficient materials for a weekly number, they propose also to pay attention to the most interesting foreign publications.

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A similar Work is likewise published at Gottenburg in Sweden, and one number comes out every month, under the title of *Samling af Kon och Uptackter*, i. e. A Collection of Experiments and Discoveries. The Editors of this Work have adopted a very extensive plan; comprehending not only Physic, Surgery, Chemistry and Natural History, but also Oeconomy, Agriculture, Trade, Manufactures, &c. together with Biographical Accounts of eminent Literary Men. We are informed in the preface, that although the Editors propose chiefly to publish those new discoveries that are made in foreign countries in the practical sciences, yet they cannot but likewise leave room for their native literary productions. They have also made it a sacred rule, never to let any indecent criticism or personality enter their publications.

From these two sources we hope, from time to time, to be enabled to communicate to our readers, important discoveries in various branches of Medical Literature, particularly in Chemistry, which has of late been cultivated in Sweden with no less assiduity than success.

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On the 29th of November 1780, died at Leyden, in the 76th year of his age, Hieronymus David Gaubius, first Physician to the Stadtholder, and Member of many of the most eminent learned Societies in Europe. Dr Gaubius studied under the illustrious Boerhaave; and, from distinguishing marks of genius and industry became so much the favourite of his Professor, that Dr Boerhaave resigned the Chemical Chair in his behalf, from the conviction that no one was better fitted to support the credit of the University. Dr Gaubius taught at Leyden, with deserved applause, for the space of 40 years. But, in the year 1775, he retired from the laborious duties of an office to which his advanced age was but ill suited, to make way for the present eminent Professor, John David Hahn, then Professor at Utrecht. The high reputation which he acquired in his own country, as a skilful practitioner, and an instructive teacher, was extended over all Europe by several valuable publications; particularly by his *Institutiones Pathologiæ Medicinalis*, and his *Adversaria*, which have contributed not a little to the improvement both of the Theory and Practice of Medicine.

On

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On the 6th of December 1780, Joseph Lieutaud, Counsellor of State, and first Physician at the Court of France, died at Versailles, in the 78th year of his age. Mr Lieutaud was born at Aix in Provence, and resided principally there, till he took the degree of Doctor of Medicine. After this he prosecuted his studies for some years at Montpellier. He returned to Aix, where he soon acquired extensive practice, and became eminent for literary abilities. There he resided till the year 1750, when he was invited to act as Physician to the Royal Infirmary at Versailles. There he practised with such reputation and success, that he soon arrived at the head of his profession; and, in the year 1774, upon the death of Mr Senac, he was appointed Archiater. His extensive engagements in practice did not prevent him from cultivating the Science of Medicine in all its branches, and from freely communicating to others the result of his own studies. He published, during his lifetime, many valuable works. Among these we may mention the following, which have established his reputation while alive, and which will transmit his fame to latest posterity.

1. Elementa Physiologiæ.
2. Precis de la Medecine Pratique.
3. Precis de la Matiere Medicale.
4. Effais Anatomique.
5. Synopsis Universæ Praxeos Medicæ.
6. Historia Anatomico-Medica.

\* \* \* \*

While we thus mention the death of two eminent Physicians, the fruits of whose labours the world have had a full opportunity of enjoying ; we cannot, without regret, take notice of the loss of an ingenious young Anatomist, Mr Andrew Blackall, who lately died at Bristol hot-wells, in the 27th year of his age. To more than ordinary natural abilities, Mr Blackall superadded singular industry. After prosecuting the study of his profession at London, Edinburgh and Paris, he settled in Dublin, his native city. There his attention and abilities procured for him the friendship and patronage of Drs Cleghorn, M'Bride, Purcell, and many others, who were happy to have an opportunity of patronizing singular merit. His ambition, however, prompted him to aim at higher objects than he thought could be obtained in Dublin. And, on a vacancy in an anatomical theatre in London, by

the death of Mr Magnus Falconer, he removed to that city, where he began the office of a lecturer with the most flattering prospects of success. But a pulmonary consumption soon put a period to his progress, and to his life.

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Dr Thomas Miek, and Dr John Lind of Plymouth, have lately been elected Fellows of the Royal College of Physicians of Edinburgh; and Dr William Grieve has been admitted a Licentiate.

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Mr John Rae, second son to Mr James Rae, has lately been admitted a Member of the Royal College of Surgeons of Edinburgh.

S E C T.

## S E C T. III.

*List of New Books.*

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**A**N affectionate Tribute to the Memory of the late Dr J. Fothergill. By W. Hird, M. D. 4to. London.

A Critical Enquiry into the ancient and modern Manner of Treating the Diseases of the Urethra. By Jesse Foot, one of the Company of Surgeons in London, and privileged Practitioner from the College of St Petersburg. 8vo. London.

A Treatise on Sympathy, in two parts. Part 1st, On Sympathy in general. Part 2d, On Febrile Sympathy. By Seguin Henry Jackson, M. D. Member of the Royal College of Physicians, London, and of the Royal Medical Society, Edinburgh, and Physician to the Westminster General Dispensary. 8vo. London.

Observations, Medical and Political, on the Small-pox and Inoculation; and on the De-

crease of Mankind at every Age ; with a comparative View of the Diseases most fatal to London during ninety years. By W. Black, M. D. 8vo. London.

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M E D I C A L

# M E D I C A L COMMENTARIES.

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## S E C T. I.

*An Account of New Books.*

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### I.

*Les Avantages de l'Inoculation, & la meilleure Methode de l'administrer.* Ouvrage traduit de la Dissertation Latine, couronnée par l'Academie Royale des Sciences, Inscriptions & Belles-Lettres de Toulouse ; & composée par M. P. Camper, Docteur en Medicine, Professeur d'Anatomie, de Chirurgie, & de Medicine, dans l'Université de *Groningue* ; des Academies de Paris, de Londres, de Harlem, &c.

**T**HIS Dissertation was written in answer to the question proposed by the Academy of Toulouse, announced in the title of the book.

Mr

Mr Camper thinks it unnecessary to notice the comparative number of deaths that happen in the inoculated and in the natural small-pox. The conclusion in favour of inoculation, drawn from such comparison, is now fixed beyond a doubt. But the advantages of inoculation, in respect of the symptoms of the disease, have not yet been clearly shown; these, therefore, our Author makes the particular object of his attention.

1. A petechial fever frequently attends the small-pox, which is for the most part fatal. Our Author has seen, in two instances, a petechial fever accompanying the inoculated small-pox. He professes his ignorance that any person has been able to discover this disposition to putrid fever lurking in the habit, by certain and undeniable signs; but of this he is sure, that the natural small-pox is frequently conjoined with petechiæ, and that they seldom appear in the inoculated small-pox.

2. A second advantage pointed out by our Author, respects the number of small-pox. He finds, that in almost every case of small-pox, the eruption is more numerous on the face than on the rest of the body, in proportion to the extent  
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of surface ; and, by an accurate observation of forty inoculated patients, he states this proportion, to be as 5 to 1 nearly, and that about one-fifth of the whole number of small-pox generally appears on the face.

But as the disease is esteemed more or less dangerous, and is said to be *confluent*, or not, according to the number of pustules on the face ; and as one-fifth of the greatest number of pustules that has been known to appear after inoculation, will never give a confluent small-pox, our Author thinks, that the danger to be apprehended from a numerous eruption is greatly lessened, if not altogether removed, by inoculation.

Under the three following heads Mr Camper notices some of the symptoms of the disease. The swelling of the face, hands and feet, and salivation, which have been considered as salutary when occurring in the course of the small-pox, our Author thinks are the consequence only of a numerous eruption, are by no means essential to the disease, and are only to be prevented by inoculation, which diminishes the number of pustules. In the same manner he accounts for the inflammation of the fauces, and the cough, on the 7th, 8th or 9th day from the eruption.

These are very troublesome symptoms ; but as it is by inoculation alone, that the number of pustules on the fauces and aspera arteria can be diminished, it appears that benefit and relief may be derived from this practice.

Our Author, after making some observations on the secondary fever, concludes, that it is possible that a secondary fever may occur in the inoculated small-pox ; but such an occurrence is very rare, perhaps does not happen in ten of a thousand inoculated persons, although it always appears in the natural small-pox. This is therefore a remarkable advantage which the artificial has over the natural disease.

Our Author, in the whole course of his practice, only observed two instances of an inflammation of the eye, followed by a speck, after inoculation. He never saw an eye entirely destroyed in consequence of inoculated small-pox.

Mr Camper slightly notices the painful suppurations, which happen under the skin, in the joints, and often in the cartilages ; the consumptions, asthmas, and abortions, so often the consequence of natural small-pox : None of these have ever been observed after inoculation.

Another

Another advantage not to be overlooked, is, that although a good many pustules are produced in consequence of inoculation, yet they never run together, and they always fall off in such a manner that no remarkable pit or scar is left.

Farther, by means of inoculation we may easily ascertain whether a person has already had the small-pox, when that is uncertain, which could not be done without endangering life, if, for the sake of the trial, the person were exposed to the infection of the natural small-pox.

Mr Camper, in the second section, treats of the best method of inoculation. Almost every author recommends the preparation of the body, so that it may happily undergo the small-pox. Our Author enters upon the subject with a view to determine whether it be possible to accomplish such preparation. After enumerating the various injunctions on this head, as laid down by *Rhazes* in the natural small-pox, he observes, that these rules have been implicitly followed by succeeding physicians, and equally applied to the natural and inoculated small-pox; for, as the disease in either case has the same course, the same doctrine, and the same rules are applicable. But we are not to reason *a priori*; for the small-

pox, like other pestilential diseases, affect us by contagion ; but that contagion acts differently, according to the difference of constitution or temperament. We must therefore enquire what constitutions are more or less favourable for the small-pox ? Whether, by any preparation, these constitutions can be changed and made better ; at what time, and by what means ? We are to examine, with the greatest attention, the success of inoculation, administered with or without preparation.

In considering the constitution or temperament, as depending upon the state of the air, diversity of climate, and of modes of living, our Author absolutely rejects any influence which these have been supposed to have in giving a favourable or unfavourable small-pox. He observes, however, that when the *skin is transparent, and of an agreeable rose-colour, the small-pox are always distinct* ; and concludes, that there are particular constitutions, adapted as it were to the confluent, others to the distinct, and others to an intermediate small-pox ; which constitutions cannot be changed by any means in our power. Besides, these constitutions are often hereditary,

so that we may predict the fate of children from what we know of their parents.

Our Author goes on to examine what physicians have done to change the nature, or abate the violence of the disease, and with what success.

They have employed blood-letting ; they have prohibited the eating of flesh and fish ; in regard to wine, oil, butter, and the like, they have either ordered or interdicted them in the same manner as *Rhazes* has done. But they have never been able to overcome the fatality of the distemper. Let us consult the bills of mortality in an age when the antiphlogistic method of *Rhazes* has been introduced ; whether the number of deaths have been fewer. From the year 1731 to 1750, 39,115 have died of the small-pox in London. It is evident, therefore, that neither diet nor medicines have any effect on the disease. The wiser physicians declare, that they never could abate the violence of the small-pox, either by blood-letting or by medicines.

The preparation of the body, so much celebrated, has been carried on for a month, for two weeks, for twelve, ten, or for nine days before inoculation. But our Author asks, If it is cre-

dible, that by blood-letting, acid diet, abstinence, and the like, the constitution of the patient can be so soon changed? Consult Gatti, Ranby, and Dimsdale, who often neglected all preparation, and you will find them all agreeing with me, says our Author, that preparation is altogether useless.

Dr Camper even goes farther, and thinks preparation hurtful, *1<sup>st</sup>*, Because the nature of the contagion is not known; *2<sup>do</sup>*, Because during the time of preparation, the patients to be inoculated are uneasy from fear and apprehension: *3<sup>d</sup>*, When the small-pox is epidemic, the persons to be inoculated are exposed, by the delay, to the natural disease.

Our Author starts the question, Whether, upon indulging the patient in the use of flesh, fish, and wine, &c. before inoculation, such formidable symptoms had appeared, as to frighten physicians, and induce them to prohibit such diet; or, after the example of Rhases, they have, without sufficient experience, adopted so cruel and ridiculous a practice? He has himself allowed to some of his patients different kinds of flesh and fat meats; in others, he has employed no medicine whatever during the course of the disease,

case, and the event of his practice never disappointed him. He acknowledges, however, that he was cautious, and never trusted patients to nature alone, but such as were of a fair complexion. He has inoculated children labouring under *spina ventosa*, and to whom he gave no medicines, with the best success. With the same success he has inoculated others, whose face and whole body was covered with herpetic eruptions, without preparation, and without the administration of any remedy. Neither does he think, that, in these instances, he was guilty of imprudence; for, ignorant what was to be done, or what ought to be given, he chose rather to commit the cure to *nature*, than to disturb this careful and provident mother, by improper medicines. He quotes also the successful inoculation of Murray and Dimisdale in a variety of chronic affections; and from the whole asks, Whether the advantages in artificial small-pox, are not derived from the circumstance of inoculation itself, and not at all from any preparation, or from medicines correcting or changing the crasis of the blood?

Our Author proceeds to consider those medicines which have been recommended as specifics

in the small-pox. Syrup of pearls, so much boasted of by *Rhazes*, antimony, and mercury, either exhibited separately or united, as was the practice of Boerhaave, and is still that of our present inoculators, have each a share of our Author's attention. He endeavours to show the uncertainty of the ground upon which they are given ; the little efficacy they have in changing the nature of the disease ; and he concludes, from the whole of his reasoning, and from his observation, that as yet no specific has been discovered for the small-pox.

Many physicians, he observes, have a singular choice of diet for patients in the small-pox. Dr Camper thinks, that every kind of diet may be proper, provided the sick take, in moderation, such things as they have been accustomed to.

He is of the same opinion respecting the exposure of the sick to cold air. He condemns the Suttonian practice as unnecessary, and frequently dangerous, from inducing other diseases. He observes, that inoculation is equally successful in the Indies, at the Cape of Good Hope, and even in the hottest regions of America, as in Sweden or in Russia. The heat or coldness of the air, therefore, is of no consequence ; we are

to consult the habits of the patient in respect of the one or other.

In respect of the season of the year, and the age of the patient, Mr Camper is inclined to avoid inoculating in the autumn; and he forbids the inoculation of very young children, especially of infants on the breast, because he has always found the eruption much more numerous with them than in patients more advanced in life. But when the natural small-pox are epidemic, these rules are not to be regarded.

The circumstance of the *menfes* occurring in the course of the small-pox, has no bad effect, as some have thought, on the disease. Pregnant women may be inoculated with safety. Wet nurses also, are inoculated, without detriment to the child, if it be not allowed to suck at the time when the eruptive fever commences.

In the choice of the matter for inoculation, Mr Camper agrees with all the inoculators, in preferring limpid matter, as being less liable to fail in giving the disease. It is best when taken from the wounds made on inoculation, especially while the eruptive fever is going on. At the same time, he observes, that inoculation repeated for six days successively, does no hurt, and one  
eruption

eruption only takes place, unless a second proceeds from a secondary fever.

It is a matter of indifference, our Author observes, from what kind of small-pox the matter for inoculation be taken ; at the same time, it may be prudent to take it from the best kind.

It is also a matter of little consequence, whether a greater or smaller quantity of the virus be applied by one or more incisions.

In making the incision, either with a needle or lancet, it is sufficient if we pierce the epidermis ; it is immaterial whether the wound is bloody or not ; and if it is, whether the blood is wiped off or not.

Mr Camper has added two plates, representing the regular and irregular changes which appear to take place in the punctures that are made in inoculation ; and he thinks they may be useful to young practitioners, who may not have had many opportunities of seeing inoculated patients.

## II.

*Observations, Medical and Political, on the Small-pox, and the Advantages and Disadvantages of general Inoculation, especially in Cities : And on the Mortality of Mankind at every Age in City and Country, &c. By W. Black, M. D. 8vo. London. 1781.*

THE first chapter of the Work before us, our Author dedicates almost entirely to the consideration of small-pox.—He first treats of the origin of small-pox and measles ; the treatment of the former, by the Arabians and Indians, and of inoculation in India and China ; the transportation of the variolous infection to America ; the introduction of inoculation to Europe ; the advantages derived from it, together with the proportion of such as die in the natural and inoculated small-pox.

He then proceeds to state the controversy respecting general inoculation in London and other great cities, at the private houses of the inhabitants ; and concludes with an investigation of the probable effects of this practice, whether it would prove hurtful or beneficial to the community

nity at large. Baron Dimisdale's different publications on this interesting subject are examined ; and, as our Author conceives, refuted.

The Baron has been a very warm opponent to a scheme that was proposed for a general inoculation of the lower class of people in London, on the supposition of its having an influence in rendering the small-pox more destructive than they have hitherto been, by keeping up a more constant supply of variolous matter.

Though the loss, says Baron Dimisdale, under inoculation is very inconsiderable, almost the whole of those that are inoculated recovering ; yet, by spreading the disease, a greater proportion take it in the natural way, more lives are now lost in London than before inoculation commenced ; and the community at large sustains a greater loss : The practice, therefore, he considers as more detrimental than beneficial to society ; and gives as the principal support of his opinion, that the bills of mortality from small-pox in London, have of late years, since inoculation became so general, increased to a truly alarming degree. The deaths from this disease, on a medium of the four years preceding the year 1776, having annually amounted to 2544.

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In answer, however, to this opinion of the Baron's, Dr Black observes, that the assertion is not founded on fact ; for before inoculation was introduced, he finds, that the deaths by small-pox were much more numerous than they have been since, even greater than in those very years selected by Baron Dimfsdale.

In the four years immediately preceding 1720, the number of deaths from this disease in London, amounted, at a medium, to nearly 3000 annually ; and at that period inoculation had been merely heard of in Britain, but had not come into practice. In 1710, when inoculation had scarcely been ever mentioned, the number of deaths from small-pox, we find to have amounted to 3138 ; and in 1681, to 2982.— In 1721, so cautious and fearful were they of inoculation in London, that in that year an experiment was made of its effects upon six condemned malefactors, who by that means redeemed their lives. From 1722 to 1727, Dr Jurin could collect only 764 persons inoculated in all that interval, including London and other parts of England ; yet notwithstanding, in 12 years only, from 1715 to 1728, small-pox deaths  
are

are found in London to amount to 27,367; or nearly to 2300 annually.

From these and other facts, Dr Black thinks it highly probable, that inoculation has not hitherto had any influence, in rendering the natural small-pox more destructive than they were before this practice was introduced; and, if all ranks of people could be induced to submit to a general inoculation, numbers, which are at present liable to be cut off by this fatal disease, might be annually saved to the state.

Baron Dimisdale farther objects to general inoculation, that it would not probably be found to succeed; from the poor in London being miserably lodged, from their houses being in close lanes, courts and alleys; from their being often in want of necessaries; and from the father and mother being so constantly abroad, in order to procure food and necessaries, as would put it out of their power to give proper attention to their children under inoculation; and from the same cause, such articles of medicine and diet as might be thought proper by the physicians, would never be regularly administered.

Various arguments are adduced by our Author in answer to these observations of the Baron's on general inoculation; but the most conclusive,

clusive, we think, is, that bad impure air, and the several objections already enumerated, must surely prove more hurtful in natural and malignant small-pox than in the mild artificial disease.

——The plan of an inoculating hospital, as proposed by Baron Dimsdale, would not, he thinks, prove of much utility, as none are proposed to be admitted under seven years of age, it being found impossible in hospitals to accommodate infants ; but it is well known, that out of all that are seized with the natural small-pox, a small proportion only occurs of such as have passed their seventh year ; so that of consequence, if this plan should be adopted, a great part of mankind would be deprived of all the advantages resulting from the practice of inoculation.

With a view to render the utility of inoculation as general as possible, Dr Black proposes that a Dispensary should be erected solely for this purpose. Here all indigent people would get their children inoculated *gratis*, would receive whatever medicines might be proper ; and in dangerous cases, able practitioners would be ready to attend at the patients houses.

All this, our Author observes, might be done with very little expence ; for, with respect to medicines,

medicines, it is well known that very few are, in general, necessary in any case of inoculation ; and such as are found necessary, are by no means of an expensive nature.—He likewise thinks, that there would be no difficulty in procuring the attendance, both of physicians and apothecaries : In the infancy of the scheme, he would expect this to be got *gratis* ; but as the funds of the institution increase, the Gentlemen employed, ought, he thinks, to be rewarded with proper salaries.

If such a plan as is here proposed, could be adopted to its full extent, the number of lives, which on a moderate calculation, might thereby be expected to be saved to the public, would be very considerable indeed. In the modern improved state of inoculation, it is well known, that there is scarcely one dies of 500. It is also known, that London, by births and recruits, requires an annual supply of, at least, 29,000 individuals : Now, by the calculation of one to 500, out of 29,000 inoculated, 58 deaths only would ensue.

Extend this calculation to Great Britain and Ireland ; by Davenant's estimate, the annual births among nine millions of inhabitants in these

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two islands, will amount to about 300,000; and supposing all these to be inoculated, and one out of 500 to die, the nation, instead of losing 30,000 annually by small-pox, which it is pretty certain she does at present, would lose only 600; and extending the same calculation to all Europe, from the numbers we suppose it at present to contain, the deaths would not amount to more than 8000; and, according to this calculation, 392,000 lives would be annually preserved, which are at present carried off by this dreadful disorder.

Having considered with great attention this important subject in the first chapter of his work, Dr Black next proceeds to treat of bills of mortality. On this subject he bestows two chapters. And in these, besides an account of their establishment in Europe, and many remarks on the mortality at different ages, in city, town and country, he presents the reader also with many critical reflections upon the diseases and casualties which have proved most fatal. And he has given tables of the diseases, casualties and total deaths from 1701 to 1776; on which he offers many important observations. But of these the limits of our work will not allow us to give an

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analysis. We may only remark, that the Author's observations lead him every where to conclude, that the bills of mortality have hitherto been conducted in an imperfect and negligent manner ; and that, therefore, before philosophers, physicians, or the country at large, can derive any benefit from them, they must undergo a very great reformation. And in a postscript to his work, he has proposed a plan for this purpose.

In place of the present unequal boundaries of parishes, and the uninformed rabble of parish-clerks and female searchers, to whom this business is at present entrusted, he proposes, that London, its suburbs and contiguous villages, should be divided into 27 or 28 equal districts ; and that to each of these, one inspector should be allotted, with a salary of L. 60 *per annum*. These inspectors should be chosen from amongst medical men, surgeons and apothecaries ; and their certificate should be indispensable previous to interment. Each of these inspectors should make a monthly report to the general hall. And here, instead of appointing a person ignorant of the principles of calculation, and still more of medicine, to superintend the general hall, to arrange  
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and class diseases, he proposes to fill that important office with an able physician, and to allow him L. 200 of annual salary.

To render the returns of births and christenings for London complete, he proposes that the clergymen of every religious sect should be compelled by law, to make a monthly return of their christenings and weddings, to any appointed church in the neighbourhood or district, specifying their religious sect. And these he proposes to be carried annually by each inspector to the general hall. He proposes also, that the inhabitants should be numbered every seven years, in the fullest season of winter, and in summer when the town is most deserted. By these means the register of births and burials might be rendered subservient to the most useful purposes. And the expence, Dr Black thinks, might easily be defrayed by a fee of half-a-crown upon each death, or a small tax upon undertakers. And for the better regulation of this important subject, he proposes that it should be put under the control and direction of the Royal Society, who should chuse the physicians and inspectors. When conducted on this footing, he thinks it might add to the value of the annual publications of the

Society, and serve as a deep reservoir of important intelligence, a rich fund of medical and political knowledge.

## III.

*A Treatise on Sympathy, in two Parts. Part 1st, On the nature of Sympathy in general, and of Antipathy and the force of imagination : 2d, On Febrile Sympathy and Consent, and on the Balance and Connection of Extreme Vessels. By Seguin Henry Jackson, Member of the Royal College of Physicians, London ; and of the Royal Medical Society, Edinburgh ; and Physician to the Westminster General Dispensary. 8vo. London.*

**I**N the beginning of the Treatise now before us, the Author endeavours to shew the extensive influence of sympathy in the animal œconomy. He considers it as the first and last principle of animal life, or of itself the living and sensitive principle. He considers sympathy as of two kinds, mental or corporeal. The first, he tells us, arises from a sensation in the mind determining to particular organs, or particular parts of the

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the body, and raising in them certain feelings, actions and inclinations, sometimes agreeable, sometimes disagreeable. Of this sort are longings of various kinds, depressing passions, &c. These, he thinks, may be called *sympathies of consciousness*. The second, he observes, depends upon the operation of external bodies, and the condition of the moving and sentient extremities of the nerves; and more generally occurs in diseased states of the system. These he names *sympathies of impression*.

These sympathies he considers as being either inherent or acquired. The inherent ones are those which have an evident utility. Of this kind are the sympathies between the stomach and the whole system, and between the stomach, uterus and skin. Those, again, he thinks, may be called *acquired*, which are only brought to light by the occurrence of disease, and do not appear to answer any other apparent end. Of this kind are the sympathetic pains between the inflamed liver and shoulder, the uneasiness of the glans penis from disorders of the urinary passages, and the like.

Sympathy, in general, he considers as greater in young than in old people, which he thinks

most probably arises from the parts of a young animal being more susceptible of irritations. Sympathy he considers as being either similar or dissimilar. It is similar when the actions, affections and sensations are exactly the same in the part sympathizing with that first affected. It is dissimilar when they are different from the actions, affections and sensations of the part impressed. Of these different sympathies, our Author gives many examples. And he shews, that sympathy is most strongly marked by affections of the stomach.

After these observations and distinctions of healthful sympathies, the Author next proceeds to make some observations on the sympathies which attend diseases : Here also he endeavours to establish many distinctions. He endeavours to shew, that inflammations may be sympathetic as well as specific : That diseased sympathy may be either universal or partial ; and that when universal it may be either immediate or secondary.

Our Author next treats of the uses of sympathy. The natural sympathies, he observes, are most evidently useful. In the case of diseased sympathies, this is less obvious. He next considers

siders what sympathies may be applied to medicinal uses ; and gives examples of sympathies which are useful to be known. An attention, he remarks, to the sympathy between the stomach and skin is particularly necessary. In obstinate vomitings, the warm bath may relieve and effectually put a stop to them. In cutaneous diseases, we should remember, that the stomach may be only sympathetically affected, and that such diseases may be cured by the operation of medicines on the stomach.

In the fifth chapter, Dr Jackson treats of the sympathetic operation of medicines. Medicines, he observes, produce even universal effects by partial operation. Their sympathetic action will be local, when only the surrounding parts act in concert with the part stimulated. It is to be considered as remote, when the remote parts sympathizing have some specific connection with the part stimulated, as the stomach with the testes, the head with the stomach, and the like. Such medicines as produce merely local sympathy, may be classed among the local applications. But if local sympathy did not assist the operation of medicines, they could have but little power to do good ; as most local diseases extend

some way beyond the surface of exposure. Thus, medicines applied simply to the skin, may relieve inflammations that go some depth. If this were not the case, how could a fomentation, which comes only in contact with the scrotum, give ease to a swelled testicle. But the fomentation produces, he thinks, a healthy action in the surface of contact, and the neighbouring parts sympathize with it, and are all relieved in a proportional degree.

It has in general been supposed, that aqueous applications to the skin, in which warmth is united with moisture, have the effect of penetrating, and thus relaxing. But although a bit of dried meat, or leather, may be affected in this manner, no effect of this kind can be produced in a living body, or even in a dead body, which still retains its fluids. The ligaments, Dr Jackson observes, will not become a bit softer, though the body were soaked for any length of time. Hence, while it is undeniable that warmth and moisture have often good effects in facilitating the reduction of dislocations, it is certain that they cannot act in the manner that has commonly been supposed. Dr Jackson is of opinion, that the surface of contact is by their operation lulled or soothed;

soothed ; and the irritability, either of the whole or part of the diseased affection, is put to rest. And it is this acquired diminution of partial excitement, which allows us to use violence more freely than before.

In the same manner also, he explains the action of unctuous and volatile applications as increasing motion. For he contends, that the oil cannot possibly touch any internal part of an animal. He thinks, however, that the good effects arising from them are not entirely to be ascribed to sympathy, but in part arise from the mechanical motion used in the application of them. On sympathy, also, he explains the effect of unctuous and volatile applications, in procuring the resolution of indurated glandular tumours, that do not belong to the absorbent system. As the remedy cannot penetrate to the part affected, its effects must, he thinks, be ascribed to its sympathetic operation, from the stimulus which it affords to the skin. And he even thinks, that when mercurial ointment is rubbed on a swelled gland in the groin from syphilis, the effect is chiefly produced by sympathy, from the stimulus of the remedy on the skin, both because the absorption must be very inconsiderable, and as  
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the absorbents, at the part of application, do not pass through the swelled gland. He admits, however, that to produce a more considerable effect, it is proper to apply mercurial preparations to the leg or inside of the thigh.

This first part of Dr Jackson's treatise, is concluded with some observations on the sympathy of the senses, and the force of imagination. In this chapter he points out many instances of sympathy produced by the passions and affections of the mind, and many sympathetic affections of the external senses. Here also, although he does not contend for the imagination of the mother having a power over the foetus *in utero*, yet he thinks, that both sympathies and antipathies often affect the child in the womb.

Before we conclude our remarks on this part of Dr Jackson's Treatise, it is proper to observe, that in many different places he acknowledges his having borrowed many of his sentiments on this subject from that distinguished physiologist Mr John Hunter. And he even mentions, that most of the arguments employed in several sections are to be considered as his. It is much to be wished, that this able philosopher would communicate his sentiments to the public on this subject

subject in his own words : For the view which Dr Jackson has given, while it serves in some degree to gratify, must still more excite the curiosity of the reader.

After having treated of sympathy in general, our Author proceeds, in the second part of his Treatise, to consider febrile sympathy and consent in particular.

Fever, he observes, is a state of the system characterized by the following circumstances. After an almost imperceptible diminution of strength in the animal functions, there comes on some degree of cold shivering, followed by an increase of heat, an increased frequency of pulse, and increased general debility. After this definition, he gives a very accurate enumeration of the different phænomena occurring in the cold, hot, and sweating stage of fever. And he delivers it as his opinion, that sympathy lays the foundation of the various changes. Parts similar, he observes, sympathize at one and the same time with the stomach, which he terms the grand sympathizer and fountain of sympathy.

This leads him to consider the physiology of the stomach, and its various affections in fever. Those affections of which he particularly treats,  
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are anorexia, nausea and vomiting. Of these he thinks a more satisfactory explanation may be given, from the supposition of a constriction of the extreme vessels of the stomach, than on any other footing. Every one will allow, he observes, that there is a sufficient proof of such a system of vessels being present in the stomach, from the frequent instances of large serous secretions, or, more properly speaking, effusions, which are collected there, and often evacuated by vomiting. And if there be just grounds for supposing a spasm to be formed on the surface of the body, it is but reasonable to conclude, that the same may take place in the stomach, and even through the whole of the intestinal tube. And if the former is in the extreme vessels of the skin, it may from analogy be supposed, that the latter depends upon a similar affection of the vessels of the first passages.

In attempting to establish this opinion, Dr Jackson has on many different occasions endeavoured to refute the opinion contended for by Dr Cullen, who will not admit that the vessels of the stomach have any concern in this matter. On this subject, Dr Jackson bestows a whole chapter, in which he treats professedly of the sympathy

sympathy and consent between the stomach and skin in fever. There he endeavours to show that this sympathy and consent depends upon the balance and connection of the extreme vessels, and not upon the condition of the muscular fibres of the stomach. And he is of opinion, that the balance and connection of the extreme vessels giving the consent between the stomach and skin, may be illustrated both by the operation of medicines and the general phænomena of fever. Nay, he attempts to shew, and in our opinion not without apparent probability, that the same arguments which Dr Cullen has made use of to illustrate his doctrine, afford still stronger illustration and evidence of the doctrine now advanced.

After thus attempting an examination and refutation of Dr Cullen's doctrine, he concludes the present work by giving a summary view of his own opinion. His opinion is, that the remote causes of fever act with a sedative effect, and induce a debility of the nervous system, whereby the vital function of the heart and arteries is considerably and particularly affected; That this debility in the circulation will most readily be felt at the extreme vessels, which terminate

minate at every part of the body; but particularly in those at the skin and primæ viæ, from established connection and mutual balance: That a constriction will then be formed, and an obstruction take place in the secretions in general, in the exhalation of the perspirable matter, and effusion of the gastric and intestinal liquors: That this constriction not only proves a general stimulus to the circulation, in consequence of a sympathy between the heart and the vessels, but a particular one to the stomach itself, as the first of the secreting organs. That this stimulus, at the same time that it increases the action of the heart and arteries, excites the stomach to vomiting; both which effects are to be considered as the efforts of the vis medicatrix naturæ, for the salutary purpose of restoring the condition of the extreme vessels, and the secretory organs in general, to their natural and healthful state; which being fully accomplished, the pyrexia and vomiting abate. These operations our Author supposes to be brought about upon the principle of a VIS INSITA SYMPATHIÆ.

Of this theory, we leave every reader to form a judgment for himself. While, however, we observe, that there are many circumstances in  
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the phænomena of fever, which, in our opinion, cannot be reconciled to this or to any other hypothesis which has yet been published ; we must also add, that we consider the Author as justly entitled to the merit of ingenuity, and sincerely wish him all success in his future speculations. He has indeed borrowed many things contained in the volume before us, from modern physiologists of the first eminence, particularly from Mr John Hunter and Dr Cullen. From the former, he has drawn a great share of the first part of his work ; and from the latter, of the second. But he has in many different places acknowledged his obligation, both to them and the others ; and he has delivered many opinions peculiar to himself. In some parts, he may perhaps be considered as having given too much scope to fancy ; yet, from a candid perusal of his work, the discerning reader will find no difficulty in discovering many striking marks of fruitful invention.

## IV.

Jo. Wences, Nachtigal, *Dissertatio de Submersis*.  
 Vid. *Fasciculus quartus Operum minorum Medicorum*. Francisci Xav de Wasserberg. 8vo.  
 Vindobonæ.

**T**HE treatise now under consideration is divided into two sections; the one, “De causa mortis submersorum;” and the other, “De auxiliis submersis ferendis.”

In the first section, our Author takes into consideration, the different opinions which, in different ages, have prevailed, respecting the immediate cause of death in persons who have suffered from remaining too long under water.

Galen, he observes, was of opinion, that death in such instances is produced from the too free access of water, not only to the stomach, but to the lungs; and this idea was universally adopted by all his followers, till towards the end of last century.

About this period, Bohnius of Leipzig, and after him Becker, ventured to controvert this doctrine of Galen. For, on dissecting different subjects, whose bodies had been long immersed

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in water, and in whose stomachs and lungs no water was discovered, they were thereby induced to consider it as certain, that death in such instances must depend on some other cause than the admission of water into the stomach and lungs.

This opinion, although for some time much controverted, yet at last came to be generally received. But the celebrated Mr Louis of Paris, in the prosecution of a set of experiments on this subject, having, in a variety of instances, found the lungs and mucus of the bronchiæ tinged with the same colour of the water in which the animals had been immersed, was thereby induced to consider the admission of water to the lungs in such instances, as the cause of death; and this opinion being afterwards adopted by Haller and others, came at last to be almost universally admitted. De Haen, however, having, in the dissection of different subjects who had suffered by immersion in water, found no vestige of water in the lungs, continued still to support the opinion of Bohnius and Becker.

Surrounded with such a variety of sentiments, all of them supported by great authorities, it comes to be a matter of much difficulty, our

author observes, to determine which of these ought to be adopted. He himself, however, is clearly of opinion, that, in all such instances, death is to be attributed solely to the consequences arising from a stoppage of respiration; for the lungs, in a collapsed state, not being able to receive their usual quantity of blood, a greater proportion must of course be sent to the vessels of the head; and, as such an occurrence must certainly terminate in apoplexy, he considers this as the ultimate cause of death. By the experiments of Ruysch, Raau, Boerhaave, Portal, and others, this fact is rendered evident, that injections pass more readily and freely through the lungs, while they are distended with air, than when in a collapsed state; and if so, no doubt, he thinks, can remain, of such people as suffer from drowning, dying in a state of apoplexy.

Having thus determined the cause of death, in such cases, to depend on too great a quantity of blood being forced into the vessels of the brain, he now proceeds to inquire into the most effectual means of relief in such instances as still afford some reason to hope for success.

The nature of the cause, our author observes, at once points out the propriety of an immediate

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loss of blood; and, for obvious reasons, any blood to be discharged, ought to be taken from the jugular vein. Independent, too, of the vessels of the brain being more immediately emptied by an opening in this vein, we are more certain of procuring a free discharge from it than from any other; for, in most cases of this kind, it is a very difficult matter to procure any considerable quantity of blood from other parts of the body.

At the same time that a sufficient quantity of blood is discharging, attempts ought to be making for procuring, if possible, a return of respiration. For this purpose, one of the by-standers is directed to apply his mouth to the mouth of the patient; and, having, by strong blowing inflated the lungs, he must with one hand prevent the escape of air by the nose, while with the other he compresses the chest, so as to imitate respiration as nearly as possible. It sometimes happens, we are told, that the lungs cannot in this manner be properly inflated: In such cases, we are desired to introduce a curved tube at one of the nostrils, and to fill the lungs by means of it. By this means, as recommended by Mr Portal, the tube falls directly in upon the

glottis, without any interference with the epiglottis ; a circumstance which frequently proves troublesome on every attempt to introduce such a tube by the mouth.

When however even this method of inflating the lungs does not succeed properly, bronchotomy is recommended as the last resource.

Together with these remedies, frictions to every part of the body are recommended. The body is directed to be kept in a moderate degree of heat ; stimulants to be applied to the nose ; and some advantage, we are told, has been reaped from injections of tobacco-smoke into the intestines.

Our Author condemns the idea of hanging the person by the feet with his head downwards. This can never be productive of any advantage ; and, by increasing the determination of blood to the head, may even do much harm. Emetics, he thinks, might prove hurtful ; but he agrees with Tissot in recommending some of the milder preparations of squills, not with a view to excite vomiting, but merely to produce a gentle degree of nausea, which, in such cases, he is inclined to consider as a stimulus of a very useful nature.

## V.

*Observations on the superior Efficacy of the Red Peruvian Bark, in the Cure of Agues, and other Fevers, interspersed with occasional Remarks on the Treatment of other Diseases by the same Remedy. By William Saunders, M. D. Member of the Royal College of Physicians in London, and Physician to Guy's Hospital. 8vo. London.*

THE efficacy of the Peruvian bark in the cure of intermittent fevers, is now universally admitted. Almost every instance of want of success is with justice attributed either to the medicine being bad in quality, or improperly administered. While the best mode of administration is a subject which has engaged the attention of many of the most able writers, the proper choice of the bark itself is perhaps still more important in actual practice. In the treatise now before us, Dr Saunders attempts to throw new light, both on the choice of this medicine, and on its general application in practice. We can have no difficulty, therefore, in giving our assent to the Author's assertion, when he observes, that, if the execution of his work were equal to

its importance, it would challenge the attention of the public in a degree far above most medical subjects.

Dr Saunders introduces his observations with some remarks on what has been said by former writers respecting the choice of Peruvian bark. He observes, that the inhabitants of Old Spain hold the Peruvian bark which is in pieces of the largest size in the highest estimation; but that, in England, the small and quill bark has been preferred. He mentions several circumstances, by which it is rendered probable, that the former is furnished from the trunks of old trees; while the latter is obtained from younger trees, not yet arrived at their full maturity. From this circumstance alone, some presumption is afforded, that it is a bark of a weaker quality. But whatever may be the true cause of the differences in the appearance of Peruvian bark, in the treatise now before us, undeniable evidence is afforded, that the bark of a large kind, having a coarse appearance and red colour, is of much superior efficacy to the white or yellow coloured bark which has hitherto been commonly imported into this country.

A considerable quantity of bark of the former kind, captured in a Spanish ship from Lima, was purchased by several druggists in London. Of this bark, Dr Saunders gives the following description: It is, says he, in much larger and thicker pieces than the common Peruvian bark. It evidently consists in three distinct layers: the exterior thin, rugged, and of a reddish brown colour; the middle thicker, more compact, of a darker colour, extremely brittle, and evidently containing a large proportion of resinous inflammable matter; the innermost of a more woody and fibrous appearance, and of a brighter red than the former. In reducing entire pieces of this bark to powder, the middle layer does not so easily give way to the pestle as the others; but when due care has been bestowed in reducing the whole to a fine powder, it is evidently more aromatic, and has a greater degree of bitterness, than the common bark. To determine still farther the comparative powers of these articles, Dr Saunders instituted several pharmaceutical experiments, of which he has given a detail at full length. In these, he tried them with watery and spiritous menstrea, by the addition of chalybeates, mineral acids, &c. From these experiments,

riments, for a more particular account of which we must refer our readers to the work itself, he draws the following conclusions :

1. That the red Peruvian bark is more soluble than the common, both in water and spirit.

2. That it contains a much larger proportion of active and resinous parts.

3. That its active parts, even when much diluted, retain their sensible qualities in a higher degree than the most saturated solutions of common bark.

4. That it does not undergo the same decomposition of its parts by boiling, as the common Peruvian bark.

And as a proof of the superior antiseptic power of the red bark, he observes, that both its cold infusion and decoction were found to preserve entire their bitter and other medicated qualities ; while the infusion and decoction of common bark, prepared at the same time, and in the same proportions, had altogether lost their sensible qualities.

To these pharmaceutical experiments, Dr Saunders next subjoins some observations on the general operation of bark on the human body. He observes, that in health it promotes appetite  
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and digestion, it has a tendency to bind the belly, and it renders the pulse fuller and stronger. All these effects he has found produced in a much higher degree, by the red, than by the common Peruvian bark. With regard to the use of the bark in the cure of intermittents, he observes, that although cautious and timid practitioners have in general forbid its use, till evacuations have been made ; yet in these which are endemic, in low and marshy situations, it cannot be given too early ; and that the use either of emetics or purgatives, as preparatory, is not only unnecessary, but in some cases productive of more debility, and therefore to be avoided. By this, however, he does not mean to insinuate, that no cases occur in which it may not be prudent to administer a vomit, especially to persons subject to bilious accumulations in the stomach. But this is more with the view of removing an obstacle to the operation of the bark, than as necessary to render it safe.

Dr Saunders agrees with most practitioners, in thinking, that bark cures intermittents more readily when taken in substance, than in any other form. But he thinks, that it ought rather to be diffused in some liquid, than given in the  
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form of an electuary or pills, which are sometimes difficultly soluble. As the best means of correcting the taste, he recommends that it should be taken in milk, old hock, or a solution of extract of liquorice. With regard to the dose, he thinks it unnecessary to limit it; one dram given every hour, will remove the disease more quickly than a smaller quantity given at longer periods.

He has found in several instances, that the red bark has removed both tertians and quartans, which had resisted the common bark. It is so much warmer than the other, that it answers all the purposes derived from the union of cordials and aromatics with the common bark. In proof of this, several cases are related. From the first of these, it appears, that an intermittent fever, which had continued for five months, and had obstinately resisted the common bark, although taken to the quantity of a dram every hour, was cured by taking one dram of the red bark every second hour, for the space of ten days.

From this, and several similar cases, Dr Saunders began to entertain hopes, that even a cold infusion of the red bark would, in most cases, cure

cure intermittent fevers, and in all other cases would answer every end which could be expected from common Peruvian bark, in any form in which it had hitherto been employed. He accordingly formed a cold infusion, by pouring a quart of cold water on two ounces of the red bark in fine powder, and frequently agitating the mixture for the space of twenty-four hours. Three cases are related of trials made with this infusion. In the first of these, a tertian, which had subsisted for many months, was stopped in two days, by taking four ounces of the cold infusion every third hour. And by persevering in its use for fourteen days, the patient was perfectly cured. In the second case, a tertian of five weeks standing, accompanied with a considerable degree of cough, especially occurring in the cold fit, was cured by the cold infusion, taken in the same manner, and the cough also was totally removed. And in the third, a quotidian, which had continued near a year, was removed by taking the cold infusion, to the extent of a quart in twenty-four hours, for three days.

To these cases, Dr Saunders subjoins some observations on the use of the red bark in the  
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cure of other fevers. He observes, that the fevers of this country seldom have regular remissions, until they have been properly treated, by evacuations, the inflammatory by bleeding, and the bilious by vomiting and purging. But when they are brought into such a state of remission, that the pulse becomes slower, that the restlessness, anxiety and tendency to delirium, abate, that the mouth and fauces are moist, and that the skin is more open and pervious at some particular time in the twenty-four hours, he thinks that the bark may be given with the same freedom as in fevers with distinct intermission, and that the red bark may be employed with peculiar advantage.

Notwithstanding the inflammation at the attack of acute rheumatism, and the appearance of the blood in that disease, Dr Saunders contends that the disease very early assumes the form of a remitting fever. When this comes to be the case, he condemns the perseverance in the antiphlogistic plan, and recommends a cold infusion of the red bark, which he tells us, he has found from experience to be much more successful than the use of volatiles and guaiac.

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In putrid and malignant fevers, Dr Saunders thinks that the cure is to be effected by vomiting and warm cordials; and, as the best article of the latter kind, he recommends the red bark, infused in wine, by which means, it becomes a more powerful antiseptic. With the same intention also, he recommends its union with acids.

Upon the whole, Dr Saunders concludes with expressing his hopes, that the observations which he has presented to the public, will remove all prejudices against a Peruvian bark of a larger and coarser appearance, and redder colour than that commonly employed. And, in confirmation of his own opinion, he subjoins extracts of letters from Mr Jacob of Feversham, Mr Boyse of Sandwich, Sir William Bishop, Dr Withering of Birmingham, Mr Sherwin of Enfield, and Dr Fothergill of Harpur-Street. The concurring testimony of all these eminent practitioners, confirms the opinion which Dr Saunders had formed from his own observations, and shews that the red Peruvian bark is more powerful than any other kind.

## VI.

*An Account of some Experiments on Mercury, Silver, and Gold, made at Guildford, in May 1782, in the Laboratory of James Price, M. D. F. R. S. To which is prefixed an Abridgement of Boyle's Account of the Degradation of Gold. 8vo. Oxford.*

THE numerous fictions with which alchemists imposed upon the world, in darker ages, have long since been fully refuted and exposed in the most satisfactory manner. After what has already been said and done upon this subject, it would hardly have been expected, that, in the end of the eighteenth century, any philosopher would have been found hardy enough to lay pretensions to the art of making gold. The principal intention, however, of the treatise now before us, seems to be, to announce to the public, discoveries which, if well founded, are unquestionably the most extraordinary that have been made for many years. Among others, we may mention the fixing of mercury, so that it is prevented from boiling in a red heat, and the transmutation of baser metals into gold and silver.

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These discoveries, however, singular as they must appear, are now announced to the public, not on the authority of a nameless or obscure inventor, but on that of a gentleman of independent fortune, whose industrious exertions, and successful attainment of knowledge in the line of chemistry, have been rewarded with marks of peculiar distinction by one of the most eminent and learned societies in Europe, the University of Oxford. And still farther weight is added to the narrative, from the experiments having been performed in presence of many witnesses : among whom are several names of high eminence, both in the political and in the literary world. We may therefore necessarily suppose, that they could neither be deceived themselves, nor could harbour an intention of deceiving others.

Under these circumstances, notwithstanding the most positive preconceived opinion against the possibility of converting baser metal into gold, and of preventing the natural, and, we may safely venture to say, almost irresistible influence of fire ; yet still every one who is a real friend to improvement, must consider the treatise before us as meriting some attention.

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In the introduction to this treatise, Dr Price observes, that a frequent perusal of ancient chemical writers inclined him to believe, that the wonders related in their works, though frequently exaggerated, had at least some foundation ; and he found that some discoveries, supposed to be modern, were really recorded by very ancient writers. Specific gravity being usually considered as one of the least dubious marks of real identity between two bodies otherwise dissimilar, it seemed probable to our Author, that mercury and gold had a basis nearly alike ; while the remarkable analogies between the habits of silver and mercury to chemical solvents and other agents, are known to every chemist. Amidst these reflections, although bewildered in a chaos of discordant opinions, yet the specious glitter of some broken gems allured him to prosecute his search concerning these subjects of which he here treats : And that, in these, he has obtained a degree of success beyond any former inquirer, appears from the result of the experiments, of which a detail is here given, and which were performed in presence of many witnesses, all of whom were fully qualified to

to detect fallacy in a matter in which every man of common sagacity could not be deceived.

To the introduction of this work, as may be inferred from the title, is prefixed an abstract of Mr Boyle's account of a degradation of gold. Of this it would be altogether foreign to our plan to give any analysis; and, in place of attempting to give a short view of all the experiments in Dr Price's treatise, we shall here present our readers with a few of them at full length, from which we apprehend they will be better able to form a judgment on this subject, than from any analysis.

EXPERIMENT I. *made May 6. 1782, before the Rev. Mr Anderson, Captain Francis Grose, Mr Russell, and Ensign D. Grose.*

Half an ounce of mercury, provided by Captain Grose, bought at an apothecary's of the town, was placed in a small Hessian crucible brought by Mr Russell, on a flux composed of borax, also brought by him; a small piece of charcoal, taken out of a scuttle fortuitously by Mr D. Grose, and examined by the rest of the company; and a small piece of nitre, taken also

without selection by the Rev. Mr Anderson, from a quantity in common use in the laboratory. These being pounded together in a mortar, which all the company had previously inspected, were pressed down into the crucible with a small pestle. On this flux the mercury was poured by Mr Anderson ; and upon it, half a grain of a certain powder, of a deep red colour, furnished by Dr Price, carefully weighed out by Mr Russell, was put by Mr Anderson.

The crucible was then put in a fire of a moderate red heat by Dr Price, who, from his greater facility of managing the fire, from long habit, was thought most eligible to conduct the experiment. He repeatedly called the attention of the company to observe the stages of the process, and to remark in every part of it, that any voluntary deception on his part was impossible.

In about a quarter of an hour from the projection of the powder, and the placing of the crucible in the fire, he observed to the company, who, on inspection, found his observation true, that the mercury, though in a red-hot crucible, shewed no signs of evaporation, or even of boiling. The fire was then gradually raised, with attention on the part of the company, and repeated

peated calls for that attention from Dr Price, that no undue addition might be made to the matter in the crucible. In a strong glowing red or rather white-red, a small dip being taken on the point of a clean iron-rod, and, when cold, the scoriæ so taken and knocked off, were shewn to the company, and found replete with small globules of a whitish-coloured metal, which, Dr Price observed to them, could not be mercury, as being evidently fixed in that strong heat, but, as he represented to them, an intermediate substance between mercury and a more perfect metal.

A small quantity of borax, brought by Mr Russell, was then injected by him, and the fire raised, but with the same precautions on the part of Dr Price, to subject every thing to the minute inspection of the persons present; and, after continuing in a strong red-white heat for about a quarter of an hour, the crucible was carefully taken out, and gradually cooled. On breaking it, a globule of yellow metal was found at bottom, and, in the scoriæ, small ones, which, when collected and placed in an accurate balance by Mr Russell, were found to weigh fully ten grains. This metal was, in presence of the

above mentioned gentlemen, sealed up in a phial, impressed with the seal of Mr Anderson, to be submitted to future examination, though every one present was persuaded that the metal was gold.

The seal being broke the next morning in presence of the former company, and of Captain Austen, and the metal hydrostatically examined, the weight of the larger globule, the others being too minute for this mode of examination, was found to be in air nine grains and a quarter, and in distilled water, of temp. Fahren. fifty plus, it lost something more than three-eighths, but not quite an half, of a grain. The specific gravity must have been nearly as 20 : 1, and in this estimate, all present acquiesced.

After this hydrostatical examination, the globule was flattened by percussion into a thin plate, and examined by Mr Russell, in the manner of artists for commercial purposes. On finishing his scrutiny, he declared it to be as good gold as the grain gold of the refiners, and that he would readily purchase such gold as that he had just examined, at the highest price demanded for the purest gold.

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The plate being then divided, one half was, before the company, sealed up by Mr Anderson, to be submitted to a trial of its purity, which Dr Price proposed that he should request his friend Dr Higgins of Greek street to make. The remainder being put into aqua regia of nitrous acid and sal ammoniac, afforded a solution sufficiently rich, before the company separated, to yield, with solution of tin, a richly coloured crimson precipitate.

Captain Grose was accidentally absent when the precipitate was made, but saw it next day. In about four hours, the portion of metal employed was completely dissolved; and the next morning, before Captain and Mr D. Grose, and Mr Russell, Mr Anderson being prevented from coming, the solution being divided into three portions, the following experiments were made.

To the first portion, diluted with water, was added a quantity of caustic volatile alkali; and the precipitate, which was copious, being duly separated and dried, about a grain of it, placed on a tin-plate, was heated, and found to explode smartly. This experiment was repeated three times.

To the second portion diluted, was added a portion of solution of tin in aqua regia. A beautiful crimson-coloured precipitate was immediately found in considerable quantity, which when dried, was mixed with a fusible frit, composed of flint-powder, and the fluxes proper for the ruby-glass of Cassius, in the proportion of five grains of the precipitate to two ounces of the frit; and, in a vitrifying heat, it afforded, in about three hours, a transparent glass, which, by heating, again assumed an elegant crimson colour. The remainder, which continued in the fire, also assumed a bright red colour.

The third portion being mixed with vitriolic æther, imparted to it the yellow colour given to this fluid by solutions of gold; and the æther being evaporated in a shallow vessel, a thin purplish pellicle adhered to the side, spotted in several places with yellow.

Dr Higgins soon after receiving the piece of metal, favoured the author with an answer, in which he notified, that the packet came to him under the proper seal, and that he was well satisfied of the purity of the gold he had received.

EXPERIMENT II. *Made at Dr Price's, May 8. 1782, before Sir Philip Clarke, Dr Spence, the Rev. Mr Anderson, Captain Grose, Mr Russell, and Ensign Grose.*

Half an ounce of mercury being procured from Mr Cunningham, an apothecary in the town, was placed on a flux composed of an ounce of powdered charcoal, two drams of borax, and one scruple of nitre, and, on it, when a little warm, was projected one grain of a white powder furnished by Dr Price.

After the crucible had acquired a red heat, the company all saw the mercury lying quiet at the bottom, without boiling or smoking in the least; and it continued in this tranquil state, after it had gained a full red heat. It was continued in a fire gradually augmented to a white heat, full three quarters of an hour, a small crucible, previously inspected, being inverted on it, to prevent coals from falling in; and the crucible being then withdrawn and cooled, many globules of white metal were found diffused through the whole mass of the scorixæ; of these, globules were collected, to the weight of ten grains, before the company separated, and con-

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signed

signed to the care of Mr Russell, who took them away with him.

Part of the remaining globules being afterwards collected, by pounding the crucible, and washing over the powder, the whole melted together amounted to thirteen grains. Mr Russell, in the course of a few days, caused this metal to be assayed in the artists manner for the refiners, at the office of Messrs Pratt and Dean, assay-masters near Cheapside, and they reported it to be silver of the most complete purity.

EXPERIMENT VII. *Made Saturday 25th of May 1782, in presence of the Lords Onslow, King, and Palmerstone, Sir Robert Barker, Sir Philip Clarke, &c.*

Two ounces of mercury were taken from a cistern in the laboratory, containing about two hundred weight, and rubbed up with a few drops of æther, in a small Wedgewood's-ware mortar. A grain of the white powder was then projected, and afterwards rubbed up with it. The mercury, which before the addition of the powder had been very bright and fluid, was now perceived by the company to be dull, and to run heavily.

vily. It was poured out into a small glass-vessel ; and, after standing about forty-five minutes, was put into a cloth to be strained. It now poured so sluggishly that the latter portions of it seemed to be in a state intermediate between fluidity and solidity. Great part of the superfluous mercury being strained off, a mass, similar to an amalgam, was left in the cloth, and the remaining mercury, which could not be pressed out, being driven off by fire, from a portion, about a fourth of the whole mass, a globule of white metal, which had all the appearance of silver, remained, and was kept in a white heat for about two minutes before the blow-pipe. This globule weighed about ten grains, so that the whole product, by means of one grain, if collected, would have been found to be forty grains.

On the same day, and before the same respectable company, half an ounce of mercury, revived from cinnabar, brought by the Rev. Mr Anderson, was by him placed in a small round English crucible, taken from among a number of others in the laboratory by Lord Palmerstone, on a flux composed of a small piece of charcoal and a piece of borax, both taken casually by some of the company, from large quantities,

quantities, and pounded in a mortar previously inspected by those present.

This flux being pressed down in the crucible with a small pestle, also examined, the mercury was poured into the depression by one of the spectators, and on it half a grain bare weight of the red powder was put by Lord Palmerstone. The crucible being then covered with a lid, taken, in the same manner as the crucible, from among many others, and shewn round to the company, was placed in the furnace, surrounded by lighted charcoal.

One or more of the company, particularly the Lords King and Palmerstone, were, during the whole time of the experiment, close to the furnace and operator, and, as requested by him, gave the closest attention to every part of the process.

When the crucible had acquired a full red heat, the cover was removed, and several of the company saw the mercury in a tranquil state, neither evaporating nor boiling, in which state it continued even when the mercury itself was completely ignited.

The cover being replaced, the fire was gradually raised to a white heat. The crucible being  
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ing continued in this heat for thirty minutes, was taken out, cooled, and broke.

A globule of metal was found at the bottom, neatly fused, and exactly filling the cavity of the divided scorixæ. The globule fell out by the blow among the fragments of the crucible, and was taken up and shown round to the company by Lord Palmerstone, and in their presence replaced in the hollow of the vitrified borax, to which it was accurately adapted.

Many other globules were diffused through the scorixæ attached to the sides of the crucible, fragments of which were distributed among the company at their request.

The bead which lay at the bottom weighed about ten grains, and was found to be perfectly pure silver, as appeared from the report of an assay-master, recommended by the clerk of the goldsmiths company.

From the experiments here related, every reader will be able to form an opinion for himself concerning the success which Dr Price has had. But without presuming to offer any remarks which may influence their judgment, we cannot help expressing our regret, that a chemist in Dr Price's situation, should not have also published

blished the process by which his red and white powders were obtained ; and that the rather, as we are told in the introduction, that he has already expended the whole of them, and does not propose to furnish himself with a second portion, having obtained them by a tedious and operose process, the effects of which he has experienced to be injurious to his health, and that he must therefore avoid the repetition of it.

## VII.

*An Account of the Jail Fever, or Typhus Carcerum, as it appeared at Carlisle in the year 1781. By John Heilham, M. D. 8vo. London.*

OUR Author, in his Preface, assigns as the motive of the present publication, “ That  
 “ the treatment of the disease, which was adopt-  
 “ ed and successfully pursued at Carlisle, appear-  
 “ ed to differ in some circumstances from what  
 “ has hitherto obtained in general practice, par-  
 “ ticularly in the more early application, and in  
 “ the much freer use of bark and port-wine.  
 “ With respect to the quantity of wine ; where-  
 “ as Sir J. Pringle never directed more than a  
 “ bottle

“ bottle in the day, and rarely so much, we  
 “ have prescribed from one bottle to two bottles  
 “ and an half daily, and always with advantage.  
 “ The doses of the bark are also nearly double  
 “ to those which the same eminent Physician  
 “ usually exhibited.”

Here we must remark, that the difference of  
 practice betwixt our Author and Sir J. Pringle, is  
 more apparent than real, and seems to us chief-  
 ly, if not altogether, to originate from the dif-  
 ferent situations in which they were placed. The  
 typhous patients of Sir J. Pringle were soldiers,  
 men generally about the prime of life, well fed,  
 of plethoric habits and sanguine temperaments;  
 of course, inflammatory symptoms often ran  
 high during the first stage of the fever. Sir J.  
 Pringle, with his usual sagacity, sometimes took  
 away a little blood, and was always during this  
 period reserved in the use of bark and wine.  
 But, in the latter period, he judiciously gave  
 both those articles, according to the urgency of  
 symptoms, of age, the constitution and former  
 habits of the patient; and altogether abstained  
 from the use of the lancet.

Our Author's patients again, according to the  
 account he has given, were the poorest and  
 meanest

meanest inhabitants of Carlisle, all of them ill fed, ill clothed, and many of them past the prime of life. He, with propriety therefore, altogether omitted bleeding, and from the very beginning gave bark and wine with a liberal hand.

The truth is, here, as every where else, no general doctrine can be delivered, which is not varied somewhat by circumstances and situation. In the present case, it would be equally unjust to affirm, with Dr Heisham, that two bottles and a half of port-wine may always be given, with advantage, to an adult in the typhus carcerum, as to suppose with Sir J. Pringle, that one bottle only was the standard quantity. In the nature of things, this admits not of a precise limitation; it depends upon a variety of contingent circumstances, and must always, in the last resort, be entrusted to the judgment of the practitioner, at the patient's bed-side.

Thus much, candour, and a reverence for the illustrious dead, obliged us to remark.

We proceed now to the dissertation itself. Dr Heisham divides it into five sections.

In the *first*, He treats of the history and symptoms of this fever. In the *second*, Of the prognostics.

gnostics. In the *third*, Of the remote causes of this fever, and particularly of the occasional causes. In the *fourth*, Of the causes which pre-disposed, or rendered the body more liable to be effected by the occasional cause when applied. And, in the *last*, He treats of the cure.

With respect to the history of the disease, we are informed, that about the beginning of April, or end of March, this fever appeared in Carlisle, at an house in Richard-gate, which contains about half a dozen very poor families. It continued during the remainder of the year, but was in a great measure confined to the town itself; and then it raged with more violence in the suburbs than within the walls. It chiefly, if not solely, attacked the common and lower ranks of people, more especially those who lived in narrow close confined lanes, and in small crowded apartments. The married seemed more subject to it than the single, adults than children, and women than men.

On the 6th January 1782, about six hundred had been seized with it, that is, about one in eleven or twelve of all the inhabitants of Carlisle, and nearly one in ten died, of those who were attacked by the disorder; for, upon searching  
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the register of deaths, it appeared, that two fell victims to it in the month of May, four in June, four in July, eight in August, seven in September, nine in October, eight in November, and six in December ; in all forty-eight, besides a soldier of the first regiment of dragoons, and three strangers.

Our Author next presents us with a very distinct detail of symptoms, which he very properly divides into common and anomalous. With respect to the common, they are too generally known to require any recapitulation. The anomalous are the following : A diarrhœa in the first stage of the fever. A cough, sometimes with, at other times without expectoration. The pulse now and then stronger than is usual in typhus. In one or two instances, a difficulty of making water, and a swelling of the abdomen, with evident fluctuation, occurred.

A relapse was never observed.

Our Author, though a professed believer in the general doctrine of critical days, and eager to have his faith supported by some new props, on this occasion, candidly confesses his disappointment. He observed patients die on almost every day of the fever, from the fifth or sixth, to the sixteenth or seventeenth, and the salutary terminations

terminations occurred as frequently on the non-critical, as on the critical days.

As the temperature of the season has been often supposed greatly to influence epidemic diseases, we have here a register of the weather, as to cold, heat and moisture, previous to the appearance of the disease, at its rise, and during its progress and decline.

In the second section, Dr Heisham treats of the prognostics in this disease.

On this part of the subject, Dr Heisham contents himself with pointing out, *first*, Those symptoms which indicate a favourable issue; and *next*, Those which portend danger and death. He is of opinion, that neither petechiæ, nor a bleeding at the nose, unless accompanied with other dangerous symptoms, indicate imminent danger: For several patients, with those symptoms, recovered as well as others who were not affected by them. He never observed, however, either petechiæ, a scarlet efflorescence, or a bleeding at the nose, in patients who began to take the bark and wine early in the disease.

The remote causes of this fever, and particularly the occasional causes, are the subjects considered in the third section.

Our Author adduces the following reasons for believing that the state of the weather was not a very powerful agent in this epidemic. In the *first* place, it was confined, in a great measure, to the city and suburbs of Carlisle. In the *second* place, The state of the air, when the fever raged with the greatest violence, was different from what it had been when it first appeared, but similar to what it was when the disease was manifestly on the decline.

After finding the state of the weather an inadequate cause to produce the effects, Dr Heisham thinks it probable, that human effluvia was the occasional cause of this fever. He here enters upon the argument of contagion at some length. In support of the opinion, the melancholy, but well known effects of human effluvia, at the Assizes held at Oxford, in the year 1577, and during the Sessions of the Old Bailey, are quoted and appealed to. After several other general observations, for farther information, we are referred to Huxham, Pringle and Lind.

When our Author comes to treat of the causes which predisposed, or rendered the body more liable to be affected by the occasional cause when applied, instead of attempting to explain  
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the *modus operandi* of those causes, he deems it enough briefly to enumerate them under the nine following heads.

1. A poor watery diet.
2. Uncleanliness.
3. Cold.
4. Intemperance in drinking.
5. Excess in venery.
6. Fatigue.
7. Grief and anxiety.
8. Fear.
9. Previous disease.

By avoiding these predisposing causes, the Doctor observes, that persons even exposed to the contagion, will, in general, escape the disease; but to render them still more secure, he recommends a generous diet, with a liberal use of wine, or spirits, the Peruvian bark, and moderate exercise in the open air.

In the fifth section of this work, Dr Heisham treats of the cure.

On this important part of the subject, our Author is very distinct and correct, but his practice does not appear to us to differ very materially from that now generally established.

From the train of symptoms, he is led to infer, that the disease in a great measure consists in extreme debility, and in a tendency of the fluids towards putrefaction. Hence the following indications of cure are deduced; *first*, To remove the causes, or obviate the effects of debility. *Secondly*, To obviate or correct the tendency of the fluids to putrefaction.

The causes which continue to operate after the disease is fully formed, are, effluvia from the patient's own body, grief, anxiety, and fear. The operation of the first of those causes may be counteracted in a great degree by a little attention. Of this Dr Heisham was well aware. He accordingly ordered the patient clean linen every day. A stream of fresh air was directed upon the sick-bed, and the chamber kept pure and sweet, by the diligent removal of the excretions, whether feces or urine. By these means, we doubt not, an accumulation of the effluvia would be prevented, and of course its virulence much diminished.

Dr Heisham next subjoins some observations respecting the regulation of passions of the mind. He directs, that if the patient be anxious about his fate, he should be inspired by hope; if influenced

enced by fear, his courage should be roused; and if grieved, his sorrow is to be soothed. But, above all, every thing which tends to produce fear, especially in those who are already sick, ought to be sedulously avoided. This leads the Author to take notice of some practices in Carlisle, which had a very great effect in that way, particularly the tolling of the death-bell, the invitation to burials by the public crier, and the funeral psalms sung through the streets. As soon, however, as Dr Heisham represented the evil tendency of these practices to the learned Dr Percy, then Dean of Carlisle, they were instantly reformed as far as lay in his power; an example well worthy of imitation at least on similar occasions, in other places where the same practices prevail.

Our Author next proceeds to the particular treatment of the disease.

At the commencement of the epidemic, before he had an opportunity of accurately ascertaining its nature, when called early in the first stage of the disease, he ordered the saline mixture, and, in case of costiveness, such a quantity of tartar emetic combined with it, as was sufficient to obviate that symptom, but not to in-

duce any great degree either of nausea or vomiting, which he found always hurtful. But, after he had more accurately ascertained the nature of the epidemic, and, when not called, which was generally the case, till the first stage was over, he rejected tartar emetic as an useless and even noxious medicine, altogether omitted the saline mixture, and confided solely in the liberal use of the bark and wine.

The following was his common formula for administering the bark :

R $\acute{x}$ . Pulv. cort. Peruv. opt. unc. unam,  
Rad. serp. virgin. dr. duas.

M. & divide in partes duodecim æquales ; sumat unam, secunda, vel tertia, quaque hora, ex vin. rubr. haust.

When the patient's stomach could not bear the bark in substance, a strong decoction was used as a substitute. To adults, from one to two bottles and a half of wine, were given in the space of twenty-four hours ; and our Author thinks, that even more might have been given with advantage, as he never saw any bad effects from an excess, though very often from the too sparing use of this grateful cordial.

Pediluvium

Pediluvium was found more prejudicial than useful; but fomentations of the feet and legs were used with advantage.

Though blisters did not appear to affect the general system, or raise the pulse, they very evidently relieved the pain of the head, which was often violent.

The symptomatic diarrhœa was immediately attempted to be checked, by the free use of astringents and opium, without any fear of retaining a putrid fomes in the intestinal canal.

Clysters were seldom employed, unless in cases of irritation, from a too long retention of the feces.

When symptoms of catarrh were conjoined with fever, the wine and medicines were administered a little warm, and the rad. serpent. virg. omitted. When the debility was excessive, and the danger great, though unattended with diarrhœa, our Author had recourse to opium.

With respect to the anomalous symptoms, they were left entirely to nature.

During the whole course of the disease, the patient was permitted the free use of fruits, unless contraindicated by diarrhœa.

By adhering steadily to the above method, we are assured, that all the symptoms were alle-

viated, the progress of the disease cut short, and the patient saved.

### VIII.

Antonii Brugmans *Magnetismus, seu de Affinitatibus Magneticis Observationes Academicæ*. 8vo. Lugduni Batavorum.

OUR Author points out a new and convenient method, by which it may be easily known, whether any body, mineral, animal or vegetable, is attracted by the magnet, and thus, whether it contains iron or not. For, although different bodies are known to contain iron, both by the test of chemical analysis, and by their affinity to the magnet; yet there are others, which, from chemistry, we know to be possessed of a martial principle, which, however, do not affect the most sensible magnetic needle.

Our Author, in the present work, endeavours to discover the cause of this effect, and, if possible, to obviate it. Nor have his labours been unsuccessful; for he has found, that different bodies, which seemed altogether destitute of iron, such as vitriol of copper, cork, and filbert-nuts,

nuts, and several others, are easily attracted by the magnet.

The whole of our Author's method turns upon this, that the bodies, the martial principle of which we wish to ascertain, should be rendered as moveable as possible. For this purpose, he recommends to place the body to be examined, upon either end of a very moveable non-magnetic needle\*, or, what is preferable, upon the surface of a very pure quicksilver, or very limpid water; and, in this situation, to approach to it a strong natural or artificial magnet of a parallelo-piped form.

Quicksilver answers exceedingly well for solid bodies, such as woods, stones, and those minerals and metals which do not readily form an amalgam with it. But fluid bodies, and those minerals which easily unite with quicksilver, and thus destroy its mobility, are either to be committed to water alone, or, if they are specifically heavier

\* We are prevented from describing this needle by the want of a plate; but our Author acknowledges, that it has frequently disappointed his expectations; on which account, it is necessary, in examining those bodies which contain little iron, to have recourse to quicksilver, or to water.

heavier than this fluid, or form mixtures with it, they are to be made to swim on its surface, placed upon a small piece of paper, or on a thin lens of concave glass ; upon which the approach of a good magnet, if the body contains iron, will not only discover it, but will frequently give it a constant polarity.

Many trials, which our Author made with the greatest care, show the utility of this method. He found, that black earth, yellow, red, and green ochre, red fuller's earth, tobacco-pipe clay, the clay of the Delft-ware, and all vessels made of it, English fuller's earth, the solar earths, and all kinds of terra sigillata, and other kinds of earth and sand, of a black, blue, or ash colour, did not resist the action of a good magnet. With the same event, he examined, not only that kind of clay which is used in making red bricks, but every other kind which acquires a yellow, blue, or other colour, in the fire. He found, that red bricks were capable of receiving a constant polarity. Whether that pure and white kind of argillaceous earth, of which the china of Saxony and Japan is made, would show the same effect, he cannot be certain ; for although china-vessels  
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are attracted, yet he informs us, that he has often met with bodies which were destitute of magnetic power, unless they had undergone the action of the fire.

Turfa, when fresh, has a remarkable affinity to the magnet. The longer, however, that this fossil is exposed to the open air, the more is this power diminished.

Indurated cement (*cæmentum*) becomes a true polar magnet. White vitriol, both natural and artificial, as also green and blue vitriol, lapis atramentarius, touchstone, stone of which millstones are made, lapis pumicis and lazuli, ardesia, lava steatites and serpentini lapides, tourmalinus, fucinum, several precious stones, as ruby, hyacinthus both of the East and West Indies, chrysolithus, smaragdus, granite, lapis nephriticus, turcosa, some jaspides and achates, as also several kinds of mica and asbestos, and the ores of iron, tin, copper, zinc, cobalt and quicksilver, were moved sooner or later by the power of the magnet, according to the quantity of iron which they contained; and thus clearly proved the falsity of the common opinion, that the ores of iron or other metals, that stones and other minerals which contain iron, are not attracted by the magnet,

magnet, unless they have been previously calcined, either by themselves, or with some inflammable body.

Our Author proceeds to show, that different animal and vegetable substances, of the martial principle of which doubts have been entertained, are readily attracted by the magnet, although they had not been prepared to show this affinity, either by calcination, or any other operation whatever. Thus, sponge, cork, Peruvian bark, filbert-nuts, almonds, the old bark of trees, cherry-stones, the woods of rhodium and mahogany, and ivory, gave evident marks of this magnetical affinity, when a small piece of these bodies, about the size of a pepper-corn (for a rounded figure is preferable) was put on the surface of quicksilver, and a strong magnet approached to them.

Other substances, again, shewed a magnetic power, when they were calcined, or reduced to ashes, or when they were, according to Boerhaave's method, changed into a simple earth so called. Of this kind are the *silices pyromachi*, writing paper, foot, white wool, several herbs and fruits, the feathers of birds, fins of fish, shells, animal bones and hair, blood and its serum,

rum, fat, and the flesh of animals; the calces of some metals, as of lead and zinc, diaphoretic antimony, red precipitate of mercury, turpeth mineral, &c.; for of all of these, a greater or smaller proportion adhered to the magnet.

By these experiments, our Author thinks, we are enabled to correct the opinions of others respecting the producing and destroying the magnetic power in bodies, and they serve also as the foundation of new doctrines.

It is not in the least to be wondered at, he observes, that Becher and Geoffroy procured an artificial iron from clay or argillaceous earth; for a considerable quantity of it enters into their composition, and is only separated by a chemical process. A certain colour of earths, such as ash or ochre coloured, is not a necessary mark of magnetic affinity; for sometimes those of a clay or other colour, are observed to approach the magnet with greater force than others whose external appearance seemed to indicate a stronger affinity: yet our Author found, by repeated trials, that the magnetic power decreased in proportion as the colour of bodies came nearer to perfect whiteness; so that some earths, and other bodies produced from them, are found,  
which

which have no magnetic affinity at all. He thinks, that indurated cement should be referred to the martial earths, on account of the great quantity of iron which it contains.

Our Author could not destroy by any art the magnetic power of iron, which however almost all the chemists deny the croci of iron to possess; for whether he examined the solutions of this metal made in mineral or vegetable acids, or the crocus appositivus of Stahl, and other calces, prepared either from solutions or with sulphur, or iron itself exposed for a length of time to the influence of the open air and moisture, he always observed remarkable proofs of magnetism; and although this property was in some measure diminished, yet this diminution depended upon the adherence of saline matter, and the magnetic power was fully restored when it was removed.

In the same manner, the separation of phlogiston from iron had no effect in destroying its magnetic power. The scorixæ of iron, that had been fused with nitre, and again separated from it, were readily acted upon by the magnet.

Thus

Thus no art is capable of destroying or decomposing this metal, in such a manner as to deprive it of its magnetic affinity.

Farther, although many substances, such as the flex pyromachus, different earths, and others which we enumerated above, become magnetic by calcination ; yet our Author does not assent to the opinion of Mr Buffon, who thinks this magnetic power is produced by the fire ; for as iron is found almost everywhere, even in the atmosphere itself, he imagines, that the martial principle of those bodies is only rendered more conspicuous by the force of the fire.

Red coral, the external habit of which bears marks of an admixture of iron, even when prepared by calcination, did not show any magnetic affinity : Hence our Author infers, that the colour of mineral bodies depends, in some instances, upon the martial principle, and in others upon an inflammable matter alone.

The magnetic attraction which some bodies show after calcination, instituted with inflammable substances, does not always depend upon the iron contained in the calcined body, but upon the martial principle of the inflammable matter. Thus, white chalk calcined *per se* has no  
magnetic

magnetic affinity; but when tallow is added during the calcination, the whole mass is attracted by the magnet. Hence, in order to ascertain the presence of iron in any body, it ought to be calcined without any addition whatever.

# S E C T.

## S E C T. II.

*Medical Observations.*

## I.

*Observations on Regimen and Preparation under Inoculation, and on the Treatment of the Natural Small-Pox, in the West Indies. To which are added, Strictures on the Suttonian Practice; in a Letter to Dr Andrew Duncan. By James Makittrick-Adair, Fellow of the Royal College of Physicians at Edinburgh.*

*Antigua, July 24. 1780.*

SOME years ago, I had prepared for the press some observations on the Suttonian regimen and practice under inoculation; but

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my sudden and unexpected return to this colony, and the multiplicity of my avocations here, prevented even the recollection of my former intention, until the small-pox broke out in the metropolis of this island, when a general inoculation became necessary.

I take the liberty of transmitting to you a narrative of my practice, not only under inoculation, but in the natural small-pox, as concerted with, and, I believe, generally adopted by, your quondam pupil, and our mutual friend Dr Samuel Athill; and shall subjoin some strictures on the Suttonian mode of treatment.

Should it be objected, that I have been anticipated in some of my strictures, I answer, that allowing this to be true; yet, besides some hints that are new, no Author that I have read, has, on his own experience, so fully pointed out the bad effects which may result from the repellent plan. If, therefore, a due attention to the following remarks, shall tend to awaken the suspicion of medical men, and thereby lead them to watch its effects, I shall not have published in vain.

SECT. I. *Treatment under Inoculation.*

The unavoidable communication between the slaves in each plantation, made it necessary to inoculate, without regarding the circumstance of pregnancy or chronic complaints : A few were inoculated by a saturated thread ; but, in general, by a lancet loaded with the matter of a matured pustule.

The ordinary diet of the slaves being simple, little change was necessary ; nor was I very rigid with respect to the regimen even of white patients.

In compliance with custom, I purged twice before inoculation, and once between that and the eruptive fever ; to all the healthy, above three months, purging pills of jalap, calomel and emetic tartar, were given ; for very young infants, magnesia, mercurius alkalifatus and ipecacuanha, were directed ; and such as were constitutionally weak, or reduced by disease, were put upon the use of bark, bitters, animal food and wine.

I did not purge the mothers of sucking infants, deeming the practice to be unnecessary, uncertain and absurd.

To avoid unnecessary repetitions, I shall divide the small-pox into four stages ; the *febrile*, *eruptive*, *suppuratory*, and that of *incrustation*.

Though the writers on the small-pox, in general, endeavour to assign a certain number of days for the commencement and termination of each of those stages ; yet I have found that a variety of circumstances may either precipitate or retard them.

About three days before I expected the eruptive fever, I directed, for all but infants at the breast, a solution of emetic tartar, acidulated with vitriolic acid, adding as much laudanum as should prevent severe nausea and vomiting : To children about six months, it was given without the acid ; but few under this age took it, except such as from disturbed sleep, twitchings and startings, seemed to be threatened with convulsions ; and in these cases, I generally preferred a tincture of ipecacuanha with laudanum.

It was a general direction, that warm water should be kept in readiness, for the immediate immersion of such as were threatened with convulsions ; and a dose of the above medicine was directed

directed to be given, and repeated every hour, or two hours, until the spasms ceased.

This diaphoretic, which generally sweated, and sometimes vomited, was continued till the eruption appeared ; after which period, no medicine was given, unless a profuse eruption, or some other circumstance, demanded it.

When the pustules were nearly dried on the face, I purged twice or thrice with the preparatory medicines, but in a larger dose.

## SECT. II. *Natural Small-Pox.*

*Febrile Stage.*] As soon as I suspected the fever to be variolous, I gave to adults about six grains of calomel, and one grain of emetic tartar ; and the operation being finished, I continued the medicine in half that quantity, every four, six or eight hours, until I could pretty exactly determine the quantum of the eruption. If it was likely to be copious, I continued the medicine till the commencement of the third stage, otherwise I desisted : If the patient was considerably vomited or purged by it, I ordered an opiate at night, but not otherwise. To all children above six months, calomel and ipe-

cacuanha were given ; to infants under that age, magnesia, ipecacuanha and mercurius alkalifatus : To the infirm of any age, bark and mercurius alkalifatus ; using the precautions enumerated above, to obviate or remove convulsions. In one case, the patient was bled, on account of considerable pains, anxiety and febrile heat.

*Eruptive Stage.*] If the eruption promised to be moderate, tepid drinks only were prescribed, and the chamber kept cool. If very costive, a clyster, or gentle aperient were given. I have already related the method of treatment, when I suspected the eruption would be profuse ; and whether before or during the eruption, if the mercurial medicine operated briskly, an opiate was given at night, with great advantage ; the patient was exposed to a free current of air, and permitted to drink cold water, if desired.

*Stage of Suppuration.*] This stage, I believe, commences very soon after the eruption, or inflammatory effusion, and proceeds successively in the different parts of the body, in proportion as the pustules appear and fill, until they have attained their full size, and acquire that yellowness of the apices, which is rarely observed, however, except in the distinct small-pox: A

proof

proof that in the confluent small-pox, a genuine suppuration does not take place. Hence it appears, that the stage of suppuration really commences and continues longer than is generally believed; and indeed the three stages run so insensibly into each other, that their periods cannot be ascertained.

If the pustules were few, warm drinks were preferred to cold, and even the gentlest aperient avoided. If the eruption was copious, and the mercurial had been properly employed in the former stages, it was now discontinued, and only an opiate given at night, provided the patient was very sore or restless; and even repeated at midnight, if the first dose had not a proper effect. But when the evacuating medicines had either been omitted in the former stages, or used too sparingly; or when the eruption had been premature, and very precipitate, and the inflammatory suffusion in the intervals of the pustules was considerable, especially if of a dark red colour; the mercurial was used through this stage, but in such small doses as not to hazard a profuse purging.

*Stage of Incrustation.*] This stage is supposed to commence from the time the apices of the

pustules in the face begin to be discoloured and hardened: But this is not strictly true; for at this time, the process of maturation is really going on in the body and extremities. A more certain and important mark of its commencement is a sensible diminution of the swelling of the face; which, though it takes place pretty regularly about the eleventh day, in the distinct small-pox, is sometimes later in the confluent. The commencement of the secondary fever depends chiefly on the detumescence of the face; but in several cases it appeared earlier; the evening exacerbation becoming more gradually severe, and the morning remission less distinct, except in a patient who died on the nineteenth day; for in this case it came on with great rigour, and the first hot fit destroyed him.

The treatment under this stage of danger was regulated by circumstances. If the secondary fever was slight, the patient was kept cool and quiet, and the belly gently soluble.

But if the secondary fever came on with any degree of severity, I again had recourse to the mercurial evacuants, blistered the back, or, more frequently, the scrobiculus cordis; and if the patient was restless at night, the opiate was  
given,

given, and generally washed down with weak warm punch.

The relics of the disease were purged off by jalap, calomel and tartar emetic, given earlier than under inoculation.

Soft vegetable drinks, and sometimes weak broths, were given through the disease.

I lost two inoculated patients; one, an infant, whose mother having died about a month before, of a puerperal fever, it was neglected by the nurse; the other, an infant of ten weeks old, of the confluent small-pox, contracted, I believe, before inoculation.

Though a considerable proportion died of the natural small-pox during this epidemic, two only died under my care; one, an old man of seventy, neglected in the first stages; and a boy who had long laboured under a diarrhœa: He had been inoculated, but without effect: He had very few pustules.

### S E C T. III.

Before I proceed to the remarks on the preceding sections, I shall assign some reasons for the present publication.

In

In the year 1766, when I settled at Andover in Hants, I found, that in the town and neighbourhood there were several inoculators, who either had been, or were then, partners of the Suttons. I was led chiefly by curiosity, to enquire into the mode and effects of this novel practice; and from a strong predilection for the cooling regimen in inflammatory and putrid fevers, I considered it as a valuable extension of Sydenham's plan; and, in the only case of inoculation in which I was at that time consulted, I adopted the reducing regimen with all the rigour of a Suttonian.

Soon after, several patients, chiefly women, applied to me for advice. Almost all their cases were complicated and anomalous; some patients were fallow and cachectic, with irregularity or obstruction of the menstrua; others, apparently athletic, were become hysterical or hypochondriacal; some laboured under irregular fevers, with perversion of all the secretions and excretions; others were manifestly hectic, with the symptoms of phthisis pulmonalis.

Of those several died; others, tired out with my unavailing efforts to relieve them, applied to some other medical men, and perhaps without success.

success. Out of more than twenty cases, I shall select the following : Those of the farmer and his wife first excited my suspicion concerning the cause.

By desire of the late Sir John Elwill, I visited a farmer and his wife, his tenants at Dean near Salisbury.

They had been inoculated twice ; but though they remained six weeks in the inoculating house, they had no eruption.

They informed me, they had both been remarkably healthy before inoculation, but had been ill ever since.

I found the farmer perpetually tortured with pains in his bowels, with constipation, and hectic fever : He was relieved chiefly by castor oil, and apozems of linseed and sal diureticus.

The wife, a corpulent athletic woman, with a train of hypochondriacal symptoms, which seemed to depend on catamenial obstructions, was, at times, subject to severe hysterical paroxysms. She was relieved, as far as depended on a restitution of the menstrua, by extract of hemlock and the aloetic pill ; but her nerves continued very irritable long after I left her.

A farmer's daughter in a neighbouring village consulted me : I found her in the last stage of a consumption, and therefore attempted palliation only. The patient and her parents assured me, that, before inoculation, she had been strong, florid and healthy, and considered her as a martyr to the new practice.

A female servant to an old bachelor my neighbour, soon after being inoculated, though the pustules were few, was seized with convulsions. They seemed to partake more of the nature of epilepsy than of hysteria. Their returns were frequent and severe ; and, in the intervals, she complained of an heavy constant pain at the scrobiculus cordis. All the means I could devise for her relief were unavailing, and she died at the end of some months of an ascites. This woman dated the commencement of her illness from the time of her being inoculated.

But as the pursuit of truth is my sole aim, I acknowledge, that several diseases were attributed to the relics of small-pox, long before inoculation was practised in Europe ; but I believe the disease was rarely productive of complaints, unless where the eruption was much more copious than under the present mode of inoculation ;

tion; and I shall hereafter endeavour to explain, how a defect, as well as an excess, of eruption, may injure the future health of the patient. It cannot be doubted, that the Suttonian mode of inoculation has rendered the immediate danger much less than under any former mode; but I am persuaded, that, to render it more safe in every respect, it is necessary, in general, to be much more moderate in the use of the reducing and repellent plan, and, in some cases, totally to desert it.

This leads me to take notice of a circumstance which merits our most serious attention, so far as regards the probable consequences.

The Suttons having remarked, that their plan always lessened, and often totally prevented eruption, they were induced not only to adopt it indiscriminately, but often to carry it to excess; because, by a quick rotation of patients, their profits were considerably increased. This method of treatment was also very agreeable to the patients; they were gratified by the prospect of being soon relieved from a rigid discipline; and the females were assured of their beauty being unimpaired.

Baron

Baron Dimsdale's candid and judicious publication did not tend so much to regulate and modify this practice, as to apply the principles of it to the treatment of the natural small-pox.

From some cases which have occurred to me, in which Dr Dimsdale's plan was adopted, I have been led to wish, that, well qualified as he is, he had been more explicit in pointing out those circumstances under which a mitigation of the general regimen would be necessary, and indeed, that he had been less implicit in adopting that plan to its utmost extent; because I am persuaded that it is unnecessary, and has been in some cases unsafe.

More than twelve years ago, the late Dr Kirkpatrick, author of a treatise on inoculation, was of the same opinion: Dr Gatti, who inoculated at Paris with the utmost success, reprobates, in the strongest terms, all preparation whatsoever; and attached as I am to mercurials and sudorifics, as preparatory to inoculation, I should deem my patient more safe without any preparation whatsoever, than under that adopted by Dr Dimsdale: But medical men must often submit to modes of practice, merely because they are in fashion.

Before

Before we proceed, it may be necessary to enquire into the probable causes of those diseases, which have been considered as consequent of imperfect crisis of the natural and inoculated small-pox, that we may be enabled to avoid, obviate, or remove them.

1. *In the natural Small-pox.*] *First*, The assimilation of such a quantity of variolose matter, that part, not being deposited on the surface, is retained in the habit. *2dly*, The whole being deposited, a part falls back again on the habit, and is not properly discharged, either from general weakness, an unfitness of the organs to separate it, or a neglect of proper evacuants.

2. *Under Inoculation.*] *First*, Debility of the constitution, either natural, or from improper regimen; by which the matter is not duly deposited on the surface. *2dly*, The efforts of the constitution being so disturbed during the process of eruption and maturation, either by resisting the determination to the surface by cold, &c. or by promoting counter-determinations, especially to the intestinal canal, and thereby preventing the natural crisis of the disease.

That much mischief may arise from interrupting critical efforts in this disease, is evident, *first*,  
From

From the alarming symptoms, nervous and febrile, often produced before the eruption. *2dly*, The dangerous and fatal commotions excited when the eruption is imperfect or totally interrupted. *3dly*, The excessive and often fatal disturbances produced by part of the virus being absorbed, and stimulating the internal organs. *4thly*, The chronic diseases produced by the relics of disease.

If, therefore, we consider the small-pox as a disease, whose natural and necessary crisis is by a *complete* deposition on the surface, the motives and indications for inoculation and concomitant treatment must be,

*First*, So to prepare the body, that the variolose matter generated in the habit shall be mild in quality, and moderate in quantity.

*2dly*, To prevent any violent or dangerous commotions, or changes, being produced in the system, during the separation and expulsion of the variolous matter.

*3dly*, To render the deposition of this matter complete and safe ; and,

*4thly*, To prevent the future health from being injured by a return of the virus into the habit.

SECT. IV. *Remarks on the preceding Sections.*

The means necessary for satisfying the preceding indications, may be considered under the heads of *diet, drinks, air, and medicine*; and, under those heads, some observations on the treatment of the natural small-pox will be subjoined.

I. *Diet.*] Abstinence from the use of stimulating food and sauces, and a moderate use even of bland nourishment, to prevent repletion, have a tendency to lessen the inflammatory diathesis, and weaken the propulsive powers of the heart; and I have been told, that some of Sutton's partners pretended, that they could so regulate the regimen, as to ascertain the number of pustules; asserting that even a single meal of animal food has produced a fresh crop of pustules. This I know, that several of Sutton's patients, by returning too quickly to a full diet, have had a fresh crop of pustules, or imposthumation. These circumstances afford a proof, that the regimen has been too rigid, and may sometimes be injurious, as appears even from some of Baron Dimsdale's cases.

Whatever other evils may arise from this plan, there is one, of which I believe it is fre-

quently productive, *viz.* too sudden repletion, from too quick a transition to full diet, perhaps often excess in proportion to the former restraint. To this probably may be owing some of the diseases attributed to retention of the virus.

Some years ago, the small-pox was introduced into this island by a ship from the coast of Africa. Several of the persons inoculated at that time, were seized with alarming symptoms; the eruptions had not their usual aspect; several died; some, instead of eruptions, had immense swellings of the inoculated arms, and ill-conditioned imposthumations and ulcers. These untoward events deterred some of the practitioners from farther inoculation at that time, from a suspicion that there was a degree of malignity in the virus. Of those who had then been repeatedly inoculated, without eruption, some were seized in the natural way during the late epidemic. I will not deny that there might be something unfavourable in the state of the air; but, from some circumstances that have occurred lately, I am inclined to suspect, that the reducing plan being carried too far, was a principal cause of those untoward accidents; for I know experimentally

rimentally, that persons in hot climates will not bear the repellent treatment to a degree which may be inoffensive in Europe. Another remark arises from the foregoing fact, that, these and other instances shew, that, by reducing the patient too much, we may absolutely incapacitate him for receiving the infection so long as he remains in that state; and yet, under a different degree of health, he may be nevertheless susceptible of it: A memorable instance of this sort happened at Marlborough in Wiltshire, which, without my interposition, would have produced a law-suit.

I shall finish my remarks on this head, by observing, that, when the eruptive fever was severe, and therefore threatened a profusion of pustules, I confined my patient to a liquid vegetable diet. In a few cases, however, I directed broths and a little wine, when the eruption seemed to be tardy, and the pustules did not fill properly, owing to constitutional debility: But I am persuaded, cases of this kind occur more rarely than the nurses suppose; and it was with the utmost difficulty I could restrain them from the use of cordials, where the apparent oppression of the spirits, and depression of the pustules,

were really the effects of over fulness, and excess of fever. Nurses in general are so strongly under the influence of this prejudice, that the utmost vigilance is not sufficient to prevent their pursuing this destructive practice.

2. *Drinks.*] Sutton's punch, as he called it, may be of use in the confluent small-pox, as sedative and antiseptic; but I never had occasion to use it: Tamarind beverage was sometimes given as an eccoprotic. In the last stage, warm sour punch, negus, or wine-whey, were of use in the evening, to wash down the opiate, especially after the operation of a purge.

3. *Air.*] In no circumstance has the treatment of the small-pox been so much improved, as by a free perfusion of the sick chamber; and we may justly attribute the mortality of the disease formerly, to confinement of the patient to hot unventilated chambers, assisted by the liberal use of cordials. The public is much indebted to Baron Dimfdale, for introducing the liberal use of cold air and cold drinks in the natural small-pox; but are we therefore to conclude, that exposure to extremely cold air is necessary under inoculation? That it will extinguish febrile heat, I have had sufficient experience; but if there is

no risk of the fever running beyond that degree which is necessary for a moderate and complete eruption, to what purpose do we apply this powerful sedative? If it were a necessary part of the regimen, inoculation would not succeed so well in the Torrid Zone, where this advantage cannot be procured: Indeed I am fully convinced, that the benefit derived from exposure to the air, does not arise so much from the degree of cold, as from a constant change of the atmosphere, immediately surrounding the patient.

It is however peculiarly incumbent on a medical writer, candidly to produce every fact or argument that may tend to invalidate his own opinion and experience; and under this idea, I think it just to observe, that Governor Holwell, in his account of inoculation in the East Indies, tells us, that from the time of incision, to the commencement of fever, cold water was poured on the patient morning and evening; but desisted from until the eruption was complete; and continued after that time, until the pustules dropped. This practice seems, *prima facie*, to be similar to the repellent plan of Dr Dimsdale, and therefore to militate against my arguments.

But I would remark, that the regimen was less rigid. It does not appear that purgatives were used. The temperature of cold water in hot climates is not many degrees different from that of the atmosphere. The application of cold, even in this degree, was omitted during the fever and eruption, and therefore could have very little effect as a repellent. And as the pustules were all opened, and re-absorption lessened or prevented, the effusion of the water in the last stage had no other effect than that of simple ablution.

*Medicine.*] Under this head I shall make some remarks on *purgatives*, *sudorifics*, *febrifuges*, *sedatives* and *stimuli*.

1. *Purgatives.*] It should seem, that the Suttonians rely much on the effect of purgatives in lessening the eruption; and in compliance with the custom of others, I used aperients as preparatory; though, when I practised in this country more than thirty years ago, I never gave a preparatory purge unless when I suspected worms, but for some time before inoculation, and in the interval between that and the eruption, kept my patients on a course of mild mercurial alteratives; yet our success then was much greater

greater than under the late epidemic ; for though more than ten thousand were inoculated, I do not recollect that in the whole island more than two persons died under inoculation : Our success in the treatment of the small-pox in the natural way, was then much less than under the late epidemic ; a proof that the Suttonian practice is more favourable under the natural than the inoculated small-pox.

Dr Sydenham, and most of the authors since his time, seem to have been exceedingly averse from promoting any kind of evacuation during the stages of eruption and maturation, lest they should interfere with the eruption, suppuration, salivation, and successive tumefaction of the face and hands. And indeed, though Drs Freind and Mead had often snatched their patients from destruction, by purging in the secondary fever, yet they remained so much under the influence of prejudice, as not to see the propriety of preventing, rather than removing those dangerous symptoms, by early purging in the first stages.

The late Dr Simpson of St Andrew's, seems to have hinted at the advantage of this practice ; but we certainly owe to Dr Dimisdale the judicious application of this and the other parts of

the sedative plan, to the cure of the natural small-pox ; and I certainly saved several of my late patients by adopting his practice, when the eruption was copious ; though when the pustules were few, whether in the natural or artificial small-pox, I deemed purging to be, *at least*, unnecessary ; and therefore purged some days later after the incrustation than is commonly practised.

Though I consider the application of the repellent plan to the treatment of the confluent small-pox, as a most valuable acquisition to medical practice ; yet from some cases which fell under my care in England, and during the late epidemic, I apprehend that it is not totally free from inconvenience and danger, though certainly much overbalanced by the advantages that attend it. The operation of purgatives cannot always be so regulated as not to exceed ; and cold, by acting too powerfully on the surface, may either repress eruption too much, or repel the matter too suddenly and copiously, and thereby produce some distressing symptoms, if it does not find a ready outlet by the intestines or kidneys.

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In all the cases of natural small-pox related by Dr Dimisdale, so far as I recollect, he had an opportunity of putting his plan in execution either before, or immediately after the commencement of eruption ; but it does not appear what steps he would have taken, had he been called when the pustules were in a state of maturation.

I did not, in consequence of a mistake, see an old man, until the stage of suppuration was pretty far advanced. The pock was highly confluent, and his spitting was copious. About the twelfth day he died, a few hours after being seized with rigor and dyspnœa.

Reflecting on this case, and on the motives which have induced physicians to avoid purging and the application of cold at this period of the disease, I suspected that salivation and diarrhœa are so far from being essential concomitants of the confluent small-pox, that they are merely adventitious, and consequent only of the excess of the variolous matter, all of which could not be deposited on the surface ; and I was afterwards confirmed in this opinion, by remarking, that such as were purged early, had very little  
salival

salival discharge, and this merely from the irritation of some pustules in the throat.

When I had the management of my patients from the commencement of the eruptive fever, I had time to regulate that and the eruption so, that very little was necessary to be done during maturation, which I did not think it right wantonly to interfere with, being tolerably assured that I had done enough to secure my patient from the effects of the secondary fever.

In a very few cases, however, I did not see my patients till the eruption was complete, and therefore ventured to put the repellent plan in practice even at this late period, and with success, the secondary fever being moderate, though perhaps less so than if purging and cold air had been applied earlier. I was indeed less averse from this trial, because, as I have already remarked, it is difficult to determine with precision, when the stage of maturation commences, or terminates. The cases were, however, much too few to establish a rule of practice; and it yet remains to be determined, whether it would be more eligible to purge during the maturation, or follow the practice of Mead and Freind, and

and begin the course of purging early in the next stage.

I have remarked (Sect. II.) that one circumstance which to me indicated purging, was inflammatory suffusion and tension round the bases in those parts of the body where the pustules run least into each other. I purged under those circumstances, not so much because I deemed this inflammation to be a dangerous symptom, as from an assurance, founded in experience, that with such an aspect of the pock, there was less danger of injuring the patient by this evacuation, than when the interstices are pale and flaccid. In the negroes, the colour of the skin prevents our remarking the degree of inflammatory suffusion so distinctly as in white persons ; and yet those who attend carefully, may partly, from the aspect, but chiefly from the degree of tension under the fingers, determine the degree of suffusion. The increase of the evening paroxysm is perhaps still a more certain indication, as it portends a severe attack of secondary fever, unless the fever of maturation is symptomatic of pain, and guided by the opiate.

2. *Sudorifics.*] Medical men ought to be exceedingly cautious in drawing their inferences  
from

from the apparent effects of any particular mode of practice. The Suttonians attribute their success to the repellent plan ; Dr Gatti succeeded equally well without any preparation, and Mr Clarke, an ingenious Surgeon at Castle-carey in Somersetshire, sweated his patients every night, between the incision and eruption, and with the greatest success : The Russians also have rendered the natural small-pox more mild, by sending the patients to the bagnios, where they sweat profusely ; and Sydenham has observed, that in the distinct small-pox, the patients had a great propensity to sweat from the commencement of eruption to the end of maturation. May not this disposition of the skin have contributed to render the eruption less copious, by carrying off a part of the assimilated matter ? Firmly believing, that, by this practice, I should at least endanger the future health of my patients less than by the Suttonian practice, I promoted a gentle sweat every night before the eruption. To the emetic tartar or ipecacuanha, I subjoined a small proportion of opium. By this addition, I rendered the sudorific effect more certain ; and, at the same time, I believed I should quiet that perturbation of the system, which in younger subjects

subjects produces convulsions, and in all tends to render the eruption too tardy from spasm, or too precipitate from excess of determination; and, under both those extremes, incomplete and dangerous, if the quantity of variolose matter happens to be great.

3. *Febrifuges.*] Whether the active antimonials and ipecacuanha have any power of lessening or preventing the eruptive and secondary fevers, by anticipation, I shall not determine; but in other fevers they are justly deemed febrifuges.

Though the doctrine of specific powers has (perhaps too hastily) been exploded by many of the moderns; yet I am of opinion, that there is in mercury some quality by which it corrects the variolose virus. It certainly constituted a part of Sutton's nostrum, and Baron Dimsdale has recommended it.

In the remittent and topical inflammatory fevers of this climate, mercury adds to the efficacy of the active antimonials, and of ipecacuanha; and in one or two cases of natural small-pox, where it affected the mouth a little, the secondary fever seemed to be more moderate than might otherwise be expected from the degree of eruption: I used the mercury and antimonial, or ipecacuanha,

cacuanha, in larger doses than it is prescribed by Baron Dimsdale, and it generally operated both upward and downward ; so that it was rarely necessary to subjoin purgatives.

4. *Sedatives.*] Such of this class as are supposed to weaken the force of the heart, and lessen the impetus of the circulation, are enumerated under the preceding heads, though the following, under certain circumstances, may be said to have a similar effect ; yet their more immediate operation is on the nervous system.

*Warm Bath.*] To such as are properly conversant with medical philosophy, there can be no difficulty in accounting why cold and warmth, qualities apparently opposite, are nevertheless both sedatives.

White children generally used the warm pediluvium for some nights before the period of eruption ; but the number of the negro patients was so great as to render it impracticable, at least very inconvenient : One only of each had convulsions. In the natural small-pox, I directed it as soon as the nature of the disease was known ; and I am persuaded, that, many years ago, an entire warm bath was very beneficial to some of my young patients, especially when the  
eruption

eruption was tardy, and the pock did not fill kindly.

How does this fact correspond with Governor Holwell's observation? "I have (says he) "been an eye-witness to the marvellous effect "of the external application of three or four "collons of cold water (each containing about "two gallons) where the pustules have sunk, "and the patient appeared to be in imminent "danger, which never failed of filling the pock, "as it were, by enchantment."

Before I proceed, I should remark, that imperfect narratives of medical cases have contributed very much to retard the improvement of the science. A judicious Physician would, after reciting the foregoing fact, have taken notice of the habit of body, the state of the pulse, the degree of heat, and other symptoms; he would also have related, whether any internal medicines were given; and, if any, whether of the cooling or cordial kind.

It is by an accurate observation of all the nice discriminating circumstances, strict analogical reasoning upon these, and a judicious accommodation of means to the end, that a Physician is distinguished from an unqualified observer, whether

whether he be a philosopher or a quack ; and it is with concern I remark, that the observations and reasonings even of the most respectable philosophers Boyle and Berkely, when they enter on medical disquisition, favour more of empiricism than of sound medical philosophy.

It may reasonably be doubted, whether either the Governor or Bramin inoculators, were competent judges of the state of the eruption ; presuming them to be equally skilful as an old English nurse. Our nurses certainly commit egregious mistakes in this respect ; and under the idea of the flattening of the pustules, have formerly done infinite mischief to the poor patients.

But, admitting the fact in its utmost extent, standing singly as it does, can any medical man believe, that the affusion of some gallons of cold water, could alone, and in every case, promote eruptions, and fill the pock when flattened and sunk ? By no means ; for, beside irrefragable proofs of the contrary, the Bramins themselves seem to have been aware, that the application of cold water tended to impede eruption ; and therefore, as I remarked before, they desisted from the use of it, in ordinary cases, during the febrile and eruptive stages.

Some

Some useful information, however, may be derived from enquiring into the circumstances under which the application of cold in this mode may be useful, unavailing or injurious.

From Sir John Chardin's account of the treatment of the Gombroon fever, which seems to have been a malignant remittent, it appears, that, whilst cold rose-water was poured on the patient, the most heating cordials were given; and it is not improbable but the practice was similar under a supposed depression of the variolose pustules, as the vicinity of India to Persia may have favoured a similarity of medical ideas and practice. Be this as it may, it will readily be admitted, that the application of cold, as antiphlogistic and antiseptic, may be beneficial, especially in the young and plethoric, when a *temporary* depression of the pulse, strength and spirits, is produced by excessive febrile heat, generated by the ungrateful stimulus of exanthematous virus on the internal organs.

But when the eruption, or filling of the pock, is impeded by a *permanent* constitutional debility; in such cases, the heat and pulse being below par, the application of cold alone would at least be unavailing, without the assistance of in-

teral stimulants ; but we may venture to say, it would in general be injurious, and that a hot bath would, in such a case, as certainly be useful.

*Opium.*] I have already made some remarks on the use of the anodyne diaphoretics under inoculation. In the natural small-pox, opiates and purges, given alternately, rendered the use of each more safe ; for, as the former were apt to increase fever, by locking up the grosser secretions, so, when purges lowered the patient, opium was an excellent cordial.

*Stimulants :—Cordials.*] Under this head I bring all such remedies as increase the power of the heart, as wine, bark, bitters, &c. They are not only admissible as preparatives for inoculation, when the patient is weak and low, but are equally useful in constitutional debility under the natural small-pox, though, in the latter case, they ought to be used with great caution. Sydenham recommends a few spoonfuls of sack in the decline of the disease ; and I have found punch or wine-whey very useful, not only at this period, but even in the more early stages, after purges.

*Blisters*

*Blisters and Sinapisms.*] These were formerly used very frequently, either before the commencement of the secondary fever, to obviate bad symptoms, or after the fever was formed, with a view to compensate for the defect of salivation, or when the swellings of the hands and feet were not sufficient; and some years ago, Dr Cloß, an ingenious German Physician, recommended the application of blisters on the approach of the eruptive fever; and that they should be kept open through the several stages of the disease. But, under the present mode of treating the small-pox, blisters are not so necessary, more certain and beneficial evacuations being substituted.

I shall conclude with the following inferences, which are, I think, fairly deducible from the premises.

1<sup>st</sup>, The small-pox being a disease, the natural crisis of which is by a cutaneous eruption, it is not warrantable to prevent a deposition of the whole matter on the surface, unless the quantity thereof shall be so great as to endanger the life of the patient.

2<sup>dly</sup>, Many dangerous and fatal diseases have arisen from the imperfect deposition of this matter, or from its retrocession.

Q 2

3<sup>dly</sup>,

*3dly*, Inoculation having been instituted to lessen, or totally prevent the hazard of deformity and danger, whatever regimen is found from experience to answer those valuable purposes, ought to be steadily pursued; but all beyond this becomes unnecessary, perhaps injurious.

*4thly*, Repeated experience shews, that very little, if any preparation is necessary, to render the inoculated small-pox safe and moderate; therefore, the rigid regimen of the Suttonians is unnecessary, and often depresses the powers of the constitution too much below the healthy standard.

*5thly*, No general mode of preparation can be equally safe and beneficial; the habit of body, the former modes of life, and the present state of health, are therefore to regulate the manner and degree of preparation.

*6thly*, In the treatment of diseases, every other consideration must yield to that of the immediate safety of the patient; therefore the reducing and repellent plan, though generally unnecessary under inoculation, though not without its hazards and inconveniencies, even in the natural small-pox, ought, nevertheless, to be  
very

very frequently adopted, as tending, beyond every other method hitherto known, to lessen the immediate danger arising from a copious eruption.

*Facts and Observations on different Medical Subjects, by Mr R. M'Causland, Surgeon to the King's or 8th Regiment of Foot.*

**I**N 1775, the year after I arrived at Niagara, the number of intermittents amongst the troops, seamen, and persons dependent on the post, was so large, that I soon found that the quantity of Peruvian bark with which I was provided, would be totally inadequate to the demands. As it was impossible then to procure any more, it became absolutely necessary to fall on some other method of treatment. One of the first remedies which I turned my thoughts towards, was emetic tartar; and the advantages which I experienced from it, soon encouraged me to make its use more general. Since that time, I have given it with success, in a great number of intermittents: I am confident I speak considerably within bounds, when I say, that, from the year 1775, to 1781, this remedy alone

has removed three hundred agues. In a great many of these cases, it was not in my power to keep any register : I cannot, therefore, give an exact account of the result of the whole number of cases in which the tartar emetic alone has been exhibited ; but in those where I have been able to keep an account of the treatment and success, I have very constantly found, that, upon an average, it succeeded in two cases in three. In 1780, during the three months of August, September, and October, I had upwards of two hundred intermittents under my care : I here give the result of several of these cases, with this necessary remark, that, upon the present subject, as well as many others, I have been prevented from pushing my enquiries as far as they might have been, by the want of medicines ; an inconvenience which the remoteness of this situation, and the uncertainty of navigation, during a time of war, have always subjected me to. With regard to the method of exhibiting the tartar emetic, I found (as will appear by the tables) that the form of pills succeeded better than solution ; and for this purpose, nothing further than a few drops of syrup, or a small quantity of elect. lenetiv. was employed.

employed. I regulated the dose in such a manner, that at first some evacuation, by vomiting or purging, might be brought on ; afterwards, it was sufficient to excite nausea, which some times ended in a single discharge of the contents of the stomach, or an extraordinary stool or two. I never gave it before breakfast, as it would then have been more liable to excite vomiting ; nor did I ever give it till many hours after dinner, lest the body should have been deprived of its necessary nourishment. I generally, therefore, gave the first dose two hours before dinner, and the second dose on going to bed, except when circumstances respecting the recurrence of the paroxysm rendered some deviation necessary. From the small quantity of tartar emetic I had, I was seldom able to give above two doses in twenty-four hours ; but I am apt to believe, that a third might be added with advantage : The time I have generally pitched upon for it, was about two or three in the morning, or as near that time as the patient might happen to awake.

Tartar Emetic in Pills.

No. I.

Cured.

Not Cured.

One Grain.	Various Quantities.	Half a Gr.	Number of days used.	One Grain.	Various Quantities.	Half a Gr.
16	3	13	5	1	1	4
6	4	1	10	2	2	2
3	1	2	15	2	2	5
1	1		20	1	2	2
26	9	16		6	7	13

Total cured,

51 Total not cured, 26

Relapsed,

15

Total of the exact  
number of days  
cure.

286

Average of the num-  
ber of days cure,

$5\frac{1}{2}$

Tartar Emetic in Solution.

Cured.

Not Cured.

One Grain.	Various Quantities.	Half a Gr.	Number of days used.	One Grain.	Various Quantities.	Half a Gr.
8	6	5	5		6	
2	10		10		6	
	1		15		7	
	1		20	1	3	
10	18	5		1	22	

Total cured,

33

Total not cured, 23

Relapsed,

4

Total of the exact  
number of days  
cure,

174

Average of the num-  
ber of days cure,

$5\frac{1}{4}$

Expla-

*Explanation of Table, No. I.*

The quantity of tartar emetic used for a dose is placed at the head of each column, and refers perpendicularly. The mark of various quantities signifies, that in those cases sometimes one grain, sometimes half a grain, or less, was taken. The figure marking the number of days that tartar emetic was used, refers horizontally. The first horizontal column contains those who took the remedy five days, or under; of these were cured sixteen at one grain, three at various quantities, thirteen at half a grain. Not cured, one at one grain, one at various quantities, and four at half a grain. To avoid prolixity, the cures were thus noted only every five days; so that all persons cured between the fifth and tenth day; appear in the column of the tenth day; but, in order to strike an average for the length of the cure, it was necessary to come to greater precision, by summing up the exact number of days of all the cases. The total was found to be 286; and this, divided by 51, the number of cases, gives 5 and 6-10ths, or  $5\frac{1}{2}$  nearly for the average. When the solution was used, the average appears to have been nearly the same, viz. 5. 2. The relapsed are those who had a relapse in the same year.

The

The observations that occur from the above table are, *1<sup>st</sup>*, That one grain for a dose succeeded oftener than smaller quantities; and, in general, the larger the dose that the stomach would bear, the more certain was the cure. *2<sup>dly</sup>*, That the greatest number were cured on or before the fifth day. *3<sup>dly</sup>*, That pills were more successful than solution, which seems to be explained by observation first; and they seemed also more gentle in their operation. *4<sup>thly</sup>*, That under the head of *not cured*, are comprehended a great many cases, in which the tartar emetic might more properly be said to be inadmissible than efficacious, as it was continued but for a few days: These were cases in which it generally excited vomiting. I have, however, comprehended both under the same head, because a remedy that cannot be used, is no better than a remedy that wants effect. To these may be added a few observations which could not appear in the table. *1<sup>st</sup>*, That the tartar emetic, on being first taken, sometimes seemed to change a tertian into a quotidian, or sometimes rendered the first fits more severe; but both these effects were uncommon. *2<sup>dly</sup>*, That the patient sometimes relapsed during the continuance of the same

same dose that had removed the fit; but this would probably not have happened, if they had enjoyed the advantages of a restorative diet and exercise. 3dly, The tartar emetic in a few cases, effected a cure without ever having occasioned vomiting; and these persons, in general, took pretty large doses, viz. a grain and a half, or two grains.

I am now to observe, that the one hundred and thirty-three cases above specified, occurred in the course of a summer which was uncommonly hot, the thermometer being frequently above ninety, sometimes at ninety-two, and once at ninety-four. I have at other times found the tartar emetic more successful than it was during this period, and know no other cause to attribute it to than the coolness of the weather. The year 1781 was remarkably cool, and of ninety-five persons who took the tartar emetic, only twelve were not cured. The number of relapses does not appear to be proportionally diminished; but this may perhaps arise merely from the circumstance of many of these cases having happened early in the summer, and consequently the patients being exposed for a great length of time (viz. during all

all the remainder of the summer and autumn) to relapses.

*Second Part of Table, No. I.*

	Cured.	Number of days used.	Not cu- red.
	48	5	1
	24	10	5
	7	15	4
	4	20	2
Total cured,	83		12
Relapsed,	220		
Average of the number of days cure, $6\frac{1}{4}$			

In this second part of the first table, I have not thought it necessary to trouble the reader with all the detail that is found in the first part. The quantity of tartar emetic used is not specified; but it is to be understood, that the dose was regulated in the manner formerly mentioned. In all these cases, the tartar emetic was given in the form of pills.

No. II.

Cured.	Relapsed.	Not Cured.
9	4	20

A draught of liquid laudanum fifteen drops, crude sal ammoniac two scruples, was given at  
the

the commencement of each hot fit. In most of the cases, the patient was under a course of tartar emetic.

No. II. is intended to shew, in some measure, the effects of anodyne draughts given at the commencement of the hot fit. After a considerable number of trials, it appeared pretty evident to me, that anodynes given in these circumstances were rendered much more efficacious by the addition of a neutral salt, as crude sal ammoniac. This draught scarcely ever failed to remove all the painful symptoms of the hot fit, to procure sleep, to bring on a copious sweat, and to shorten the paroxysm. Such effects were certainly very desirable, and, in some cases, worth procuring at all events; and yet I am inclined to think, that these palliative draughts tended to protract the disease, and to hinder a perfect cure. I cannot positively affirm this, because I am well aware that a considerable number of the cases in No. II. were rather more severe than the generality; and if obstinacy in intermittents should invariably be found to be connected with the severity of the paroxysms, it will be necessary to strike off at least one-third of the cases from this table, as being rather above

bove the medium, in respect to the degree of violence. Upon the whole, the effects of these draughts seem so desirable, that experiments should be made in greater number, and with more accuracy than the present, before they ought to be rejected.

### No. III.

	Cured.	Relapsed.
By tartar emetic, either in pills or solution, according to No. I.	84	19
By Peruvian bark, - -	60	34

By No. III. it appears, that there were much fewer relapses after the tartar emetic than after the Peruvian bark; and it only remains to enquire, how far the circumstances were similar in which these trials were made. And, *first*, in favour of the bark, it must be observed, that in about half of the cases in which the Peruvian bark was given, the tartar emetic had already been exhibited without success. Suppose, that of these thirty cases, it had been inadmissible in fifteen; and that, in the remaining fifteen, it had been fairly tried without success: It will then be reasonable to suppose, that these last fifteen cases were in their nature more obstinate than

than the medium. On the other side of the question, it may be urged, *first*, That as intermittents here cease (with a very few exceptions) on the setting in of the cold weather, and as the trials of the tartar emetic were made in the summer, whilst those of the cortex were made at the close of the season of intermittents, it must be allowed, that there were more time and opportunities for relapses in those who took the tartar emetic, than in those who took the bark ; more especially when we consider, that a soldier, as soon as he was discharged from the sick list, became liable to all the inclemencies of the weather, often being wet up to his middle all day, and lying in the woods all night, exposed to the fogs, rain, and moisture of the earth. *2dly*, It must be observed, that a considerable number of those who took the bark left Niagara immediately after, so that there was no opportunity of noting relapses, if there were any. Upon the whole, I am of opinion, that the arguments on both sides seem so nearly balanced, that we may venture to take the table as it stands.

## No. IV.

<i>Cured.</i>	<i>Relapsed.</i>	<i>Not Cured.</i>
12	9	1

A pill, composed of tartar emetic two grains, opium half a grain, taken two, three, and sometimes four times in twenty-four hours.

*N. B.* The average of the time required for a cure was seven days.

No. IV. shews the result of some experiments formerly made with a combination of tartar emetic and opium in intermittents.

The success here appears to have been great, and yet, upon the whole, I do not think it is a method that can be recommended. The objections were, first, The disagreeable circumstance of an almost constant sickness. The second is a consequence of the first, *viz.* The patient not being able to take nourishment; he therefore remained weak; and to this, in a great measure, must be attributed the great number of relapses; at the same time, it ought to be observed, that these trials having been made early in the summer, there were more opportunities for relapses that season. I made a few trials with the cuprum ammoniacum and the flores

flores zinci. The former succeeded in some cases, but excited considerable sickness, and sometimes vomiting. The zinc seemed to have not the least effect upon the intermittent. I have cured several intermittents, by putting the patient's feet in warm water, and giving a draught of liquid laudanum from twenty-five to thirty drops, with one dram of crude sal ammoniac, about an hour and a half before the fit was expected. I must, however, acknowledge, that it has likewise very often failed: Perhaps its failure is as often owing to the difficulty of fixing upon the exact time of exhibition. As to want of efficacy in the remedy, I think I have heard it observed by Dr Cullen, that if the stimulant effects of an opiate were over before the time of the recurrence of the paroxysm, it would not succeed in preventing it. Supposing this to be the case, the difficulties are evident: 1<sup>st</sup>, The period of the stimulant effects of opiates is to be fixed. 2<sup>dly</sup>, It is necessary to ascertain whether the constriction upon the surface is not irremediable (at least by any means we could chuse to make use of) many minutes before there are any manifest signs of it. These are difficulties, even supposing the returns of the paroxysm to

be regular to a minute; how seldom this is the case, I leave to every practitioner to judge. It has been observed in general, (but with many exceptions,) that if the above remedy succeeded in raising a sweat, it prevented the return of the paroxysm: Whether this was not rather a concomitant effect than a cause, may, I think, be very justly doubted; certain it is, that I have frequently known a profuse sweat suddenly disappear, and a regular paroxysm instantly succeed.

I shall now close this subject with a few general remarks; and the first that occurs, is, that in all the above cases the diet was the most unfavourable that can be supposed, the only alternatives being salt pork, or bread and tea. It is but reasonable to suppose, that if a nourishing diet, of easy digestion, could have been procured, the proportion, both of failures and relapses, would have been considerably diminished. 2dly, Before an intermittent be completely formed, there is for many days a state of lassitude, diminished appetite, and tendency to thirst, with aching in the limbs. The tartar emetic given in these circumstances, has never failed to remove the symptoms, and prevent the formation of

of a regular ague ; but it must be acknowledged, that observations of this kind were not very extensive, as soldiers seldom complain till they have already had a paroxysm or two. *3dly*, From what has been said, it appears, that tartar emetic is an useful remedy in intermittents. In the cases in which it succeeds, it is probable that it will be found to have two advantages over the bark ; *first*, That the patient will be less liable to relapses. *2dly*, That it will leave him with a better appetite, and, upon the whole, in a better state than the bark. But if, on the contrary, after five or six days trial, it should not be found to have lessened or retarded the paroxysms, it will at least be attended with this advantage, that no time will have been lost, and the patient will be as well, or perhaps better prepared for the exhibition of the bark, than he would have been by any other course in the same time. There are, however, cases in which little can be expected from it, and others where it might be highly injurious. Amongst the former, I imagine, may be reckoned intermittents of long standing, where the strength is much impaired. Amongst the latter, great irritability of the stomach intestines, or perhaps even of the

system in general. There is one circumstance worth remarking, *viz.* that though in North America intermittents are very common in the vicinity of all the large lakes that are to the southward of 45 degrees of latitude, yet I have never seen a quartan, or met with any practitioner that had seen one. Whether the tartar emetic would be equally efficacious in fenny situations, and countries where quartans are met with, I cannot pretend to say. There is another phænomenon, which, from the descriptions of intermittents I have generally met with, I should be led to imagine was rather peculiar to this part of the world, I mean the frequent want of a lateritious sediment in the urine. In this particular, I have taken all the precautions I was acquainted with, *viz.* taking my observations only from urine passed at the termination of a paroxysm, and in cases where the intermissions were perfect; and yet the proportion of those where there was no sediment was as four to one.

I have said above (p. 260.) that if the patients could have had the advantages of a nourishing diet, it was reasonable to suppose, that the number of failures and relapses would have been diminished.

minished. Succeeding observations have not absolutely contradicted this supposition; but I must acknowledge, that they have by no means tended to confirm it; and, in the few cases I have had an opportunity of seeing, I have certainly not found all the benefit I expected from the article of diet. As far as I have been able to observe, the soldiers were cured as soon as the officers and other persons who had every advantage that could arise from a nourishing diet and the use of wine. I am apt to believe, therefore, that the benefit of a cordial and nourishing diet must be limited to cases of some standing, and that, in the first days of an intermittent, a diluting diet may be more proper, even though there are no signs of an inflammatory tendency, and although the primæ viæ are already cleared. The want of appetite, and aversion to wine, which takes place at this time, seem to point this out. If this be really the case, it is an easy matter to perceive the reason why the tartar emetic, which in general performs a cure in the first six or eight days, succeeded as well with the soldiers as with the officers.

From the observations which I have been able to make, riding on horseback appears to be

much more entitled to the name of a specific in intermittents than in consumptions. Unfortunately the inactivity of the mind and body which this disease induces, seldom allow the patient to push it as far as is necessary. Riding should certainly never be carried so far as to fatigue; but every day will remove this limit to a greater distance. In countries where intermittents are endemic, daily riding on horseback may not only be serviceable as a preventive, but it is also attended with this further advantage, that in case of sickness, it can be pushed much farther without fatigue than if the patient had never been accustomed to it.

I come next to mention a few trials which I made of a remedy said to be of much repute among the Indians and Woodsmen of North America, for the cure of the dysentery. I had often been told, that wood-ashes, mixed in rum, was a very effectual cure for this disease; at last, an officer who had been out with Indians on a scout, assured me, that he himself had been cured by it. Supposing that the virtue of this remedy must depend on the fixed alkaline salt, I made a lixivium of ashes in water; and after the  
previous

previous evacuations by a vomit and purge, I gave it to eight persons: Of these, seven were cured by it; and this in the course of eight or ten days upon an average. It is remarkable enough, that this remedy, although so acrid as to excoriate the fauces, if not largely diluted, always eased the belly, and removed the gripes very soon after it was swallowed, and gradually diminished the number of stools. There was reason to imagine that it sometimes had a slight purgative effect. After some trials, I at last fixed upon what appeared to be the most advantageous dose, and by evaporating it, found that it contained about forty-six grains of residuum, which was nearly all fixed alkali. I generally gave this dose every night, and sometimes repeated it in the morning. I must now observe, that the above eight cases were not of the most violent kind, as the number of stools in twenty-four hours did not in general exceed ten or twelve; but encouraged by this success, I afterwards made trial of it in more violent ones, and particularly in two or three, in which the number of stools in twenty-four hours exceeded one hundred. I cannot say, that in these cases I perceived any benefit from it; at the same time,

it is but justice to acknowledge, that I did not repeat this remedy so often, or persist in its use so long, as the violence of the disease might require. Notwithstanding what I had experienced, I could never free my mind so far from prejudice, as not to dread the effects of so acrimonious a medicine, in a disease where the parts must always be in some degree in a state of inflammation whenever it is violent. Nevertheless, if I should ever be in such a situation as to be destitute of other remedies for the dysentery, authorised by the testimony of so many persons, and by my own experience, I should make no scruple to push my experiments with this remedy much farther. I must not omit observing, that in the last mentioned cases, in which it did not succeed, and particularly in the two or three violent ones there specified, on its first exhibition it incontestibly gave ease, and the stools came away with much less pain; succeeding doses had certainly not an equal effect, and I even began to suspect that they increased the disease; whether or not I did not take the alarm too soon, I will not pretend to determine. The patients afterwards recovered by the common methods, and there is therefore reason to suppose,

pose, that at least the lixivium did no essential injury. I have stated these facts as they happened; and if they should tend to throw any light, either on the theory or method of treatment of the dysentery, my purpose will be answered.

*Register of forty-six Cases of Lues Venerea.*

*Explanation of the following Tables.]* The first two columns mark the state of the disease at the time the cure was undertaken; the first shewing the number of days that the patient had had the complaint; the second column marking the degree; and, for this purpose, I have distinguished three stages. *1<sup>st</sup>*, Excoriations or ulcerations confined to the prepuce or glans. *2<sup>dly</sup>*, Eruption, tumour, or ulceration, in any other part of the body, without nocturnal pains, or affections of the bones. *3<sup>dly</sup>*, Nocturnal pains or affections of the bones. The figures in this column, therefore, signify, first, second, third stage; and, for further precision, the degree of violence of each stage is subjoined by the initial letter of Slight, Middling, or Violent. I do not pretend to enter  
into

into the merits of these distinctions; all that I can say is, that something of the kind was absolutely necessary for reducing cases to a table, and that this form was the first that suggested itself to me. The third column gives the season of the year, and the patients names, which are numbered merely for the convenience of references. The fourth and fifth shew the result. The sixth and seventh shew the removal of the symptoms; the sixth pointing out in how many days the cure was effected, and the seventh by what quantity of the remedy. It often happened, that warts, or a thickening and hardness of the prepuce, remaining after the inflammation was gone, rendered the exact time of the symptoms disappearing rather doubtful; all these cases, therefore, are marked with the letter D. With regard to the eighth and ninth, intended to shew the evacuation caused by the mercury, I am sensible that this head is in a very imperfect, and a very incorrect state. In general, the figures show in how many days the spitting began, and by what quantity of mercury; and where the letters U or S occur, they signify, that the Urine or Sweat was increased. The tenth and eleventh respect the whole course; the

tenth

tenth shewing the number of days that it continued, and the eleventh the quantity of the remedy employed. It will perhaps be objected by some, that even in the average of these tables there appear great inconsistencies, the confirmed lues venerea in its last stage having sometimes required but a small quantity of mercury, whilst the first stage has required a very large one. But this observation will only tend to confirm what I wish to represent, *viz* the insufficiency of confined observations, and the necessity of extensive ones.

In almost all the cases of lues venerea, the infection was communicated by Indian squaws, and I have been sometimes inclined to think, that it was more virulent than when communicated by white women.

METHOD

**METHOD I.** *Corrosive Sublimate Mercury one-fourth grain in half an ounce of spirits, twice, and in some cases thrice a-day.*

Number of days standing.	State.	Degree.	Names.	Result.		Symptoms disappeared.		Evacuation.		Course.	
				Not cured.	Relapsed.	in Days.	by Grains.	Spitting began.		Days.	Grains.
6	I. M	Feb.	1. Wills.							6	3
2	I. S	July	2. M <sup>c</sup> Cann.			4	2			14	7
1	I. S		3. Gollaughar.			10	5			19	10
2	I. M		4. Patmore.			10	5			24	12
3	I. S	Sept.	5. Overhead.			12	6			18	9
3	I. S	Nov.	6. Embery.			12	6			36	18
18	O. S	Dec.	7. Affel.			40	20			50	25
2	I. S	Oct.	8. Tarling.	I						57	28
6	I. M	Nov.	9. W. Wright.		I	21	10			31	15
5	I. M		10. Pearce.		I	59	29			63	31
7	I. S	July	11. M <sup>c</sup> Lanigan.			9	4 $\frac{1}{2}$			24	12
2	I. M	Jan.	12. Flaharty.			46	26			53	31

Cured, 8

{ Not cured, 2 } Not cured, 4

{ Relapsed, 2 }

Total. 8

1st Stage, { Cured, 5 } 6

{ Not cured, 1 }

2d Stage, { Cured, 3 } 6

{ Not cured, 3 }

*Averages of a Course.*

	Days.	Grains.
1st Stage,	29	10
2d Stage,	46	23

METHOD II. *Acrid Corrosive Sublimate Mercury*  
*one-fourth grain, twice or thrice a-day.*

State.	Names.	Result.		Symptoms disappeared.		Evacuation.		Course.	
		Not cured.	Relapsed.	In Days.	By Grains.	Spitting began.			
Number of days standing.	Degree.					Days.	Grains.	Days.	Grains.
190	3.M.	Mar. 1.	St Robison.					34	20
200	2.M.	Feb. 2.	C. Hains.	42	23	10	8	56	33
4	2. S.	3.	Liddle.	24	7	7	4 $\frac{1}{2}$	39	14
5	1.M.	4.	Prescot.	24	17	20	15	38	23
21	3. S.	5.	Stoppie.	35	26			49	37
4	1.M.	6.	St Pierrie.	51	25	29	21	56	28
120	2. S.	7.	Ashton.	D		8	4	50	8
7	1.M.	8.	Roebuck.	42	30			56	41
3	1.M.	9.	Williams.	20	12			36	24
D.	2.M.	10.	Ruffen.	48	35	52	38	61	42

Remarks.

The sublimate was here made acrid, by the addition of fal ammoniac. The solution was in water.

Cured, 6 }  
 { Not cured, 1 } Not cured, 4 } Total.  
 { Relapsed, 3 }

1st Stage, { Cured, 3 } 4  
 { Not cured, 1 }  
 2d Stage, { Cured, 2 } 4  
 { Not cured, 2 }  
 3d Stage, { Cured, 1 } 2  
 { Not cured, 1 }

Averages of a Course.

	Days.	Grains.
1st Stage,	46	36
2d Stage,	51	24
3d Stage,	41	28

METHOD

**METHOD III.** *Acrid Corrosive Sublimate Mercury*  
*one-fourth grain, twice or thrice a-day. Decoction*  
*of the woods four ounces, twice a-day: The warm*  
*bath, five, six, or more times during the course.*

State.	Names.	Result.		Symptoms disappeared.		Evacuation.		Course.	
		Not cured.	Relapsed.	In Days.	By Grains.	Spitting began.		Days.	Grains.
10	2. S. March 1. Baker.			22	15	20	15	36	20
10	2. S. 2. S. Wells.			19	12	5		31	20
14	1. M. 3. Hully.			25	11	4	2	37	17
21	1. V. April 4. Johnson.			26	15	12	9	36	20
10	2. M. 5. Flaharty.			59	43			72	53
35	1. S. June 6. C. Robison.			9	5	8	5	23	11
21	1. M. April 7. Atkins.			D.		20	8½	72	19
6	1. S. 8. Wills.	I				26	13	55	7
60	2. V. 9. Bush.		I	D.				50	27
10.	2. M. June 10. S. Pearson.			37	27			48	36
3	1. S. June 11 Keyfal.		I	32	17	19	14	32	17

*Remarks.*

*N. B.* In the eleventh case, as the medicine was obliged to be omitted (on account of another complaint) the same day the symptoms disappeared, it is called *irregular*, and not included in the general summing up of the cases.

		Cured,	8	} Total.
{	Not cured, 1	Not cured,	2	
	Relapsed, 1			

1st Stage.	{ Cured,	4	} 5
		Not cured,	
2d Stage.	{ Cured,	4	} 5
		Not cured,	

*Averages of a Course.*

	Days.	Grains.
1st Stage,	44	16
2d Stage,	47	31

One irregular Case not cured.

ART. I. METHOD IV. *Friction with Mercurial Ointment.*  
*The Warm Bath, five, six, or more Times.*

Date.	Names.	Result.		Symptoms disappeared.		Evacuations. Spitting began.		Course.		References.
		Not Cured.	Relapsed.	In Days.	By Drains of Mercury.	In Days.	By Drains of Mercury.	Days.	By Drains of Mercury.	
3. M.	Dec. 1. Lamb					5	2	72	11	
1. V.	May 2. Maycock			D.		23	28	41	40	
2. M.	3. Ling			20	6 1-3d	7	2	52	11	
1. V.	4. C. May			18	9	9		28	11	
3. V.	March 5. Walt			9	3	11	3	28	5	
1. M.	6. Bayes			53	9	6	3	64	12	
1. S.	April 7. Roebuck	I		34	11	8		44	14 1-3d	2. of IV. 16.
1. S.	8. Bayes			13	2 2-3ds	6	2	28	3 1-3d	
1. M.	July 9. Godfrey			10	2 2-3ds	8	2 2-3ds	21	4 2-3ds	
2. S.	Aug. 10. Hubber	I		5	2	6	2	26	4 2-3ds	2. of IV. 20.
2. S.	Sept. 11. Lewis	I		14	2	5	2	35	4	2. of IV. 18.
1. V.	Oct. 12. D. Derry			18	2	16	2	31	4	
2. S.	13. Miner	I		22	4 2-3ds	14	4 2-3ds	44	7 1-3d	V. 2.
1. S.	14. Ward			8	1 1-3d	11	1 1-3d	28	3 1-3d	
1. M.	Sept. 15. Almon			29	5 2-3ds	7	2 2-3ds	52	9	
1. M.	Nov. 16. Swiney			34	6 2-3ds	8	3 1-3d	52	8 2-3ds	
2. M.	17. M'Laughlan			25	4 2-3ds	10	3 1-3d	45	8 2-3ds	
1. M.	18. Burrows	I		39	6 2-3ds	9	2 2-3ds	56	8 2-3ds	2. of IV. 19.
2. M.	19. Cooper, A.			47	6 2-3ds	6	2	63	11 1-3d	
2. V.	March 20. Cooper, P.			20	3 1-3d	6	2	43	6 2-3ds	
1. S.	Feb. 21. C. Moran			30	8	19	6	44	11 1-3d	
2. S.	22. Pickering			21	4	8	2 2-3ds	37	6	
1. S.	May 23. A. B.			24	6 2-3ds	31	9	41	11 1-3d	
2. M.	24. C. D.			34	4	4	1 1-3d	35	10	
2. M.	25. Allen.			D.		11	3 1-3d	44	7 1-3d	

N. B. To avoid all mistakes occasioned by the different ways of preparing mercurial ointment, the quantity of extinguished mercury is here marked, and not the quantity of ointment.

{	Not cured,	{	Cured,	-	-	20	}	Total.
			{	Not cured,	5			

In

In the 1st Stage,	{ Cured, - -	11	} 13
	{ Not cured, -	1	
2d Stage,	{ Cured, - -	7	} 10
	{ Not cured, -	3	
3d Stage,	{ Cured, - -	2	} 2
	{ Not cured, -	0	

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*Averages of a Course.*

	Days.	Drams of Mercury.
In 20 cured,	42 $\frac{1}{2}$	9 $\frac{1}{4}$
In 5 not cured,	41	7 $\frac{1}{2}$

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*Averages of the Removal of Symptoms.*

	In Days.	By Drams of Mercury.
General Average,	23	5
Average of the 1st Stage,	25 $\frac{3}{4}$	6
2d Stage,	20 $\frac{3}{4}$	4
3d Stage,	9	3

PART

PART II. METHOD IV. *The Method of No. IV. viz. Frictions and Bathing, tried upon Patients who had previously used some other Method without Success.*

Number of Days standing.	State.	Degree.	Names.	Result		Symptoms disappeared		Evacuations. Spitting began.		Course.		Refer-ences.
				Not Cured.	Relapied.	In Days.	By Drans of Mercury.	In Days.	By Drans of Mercury.	Days.	Drans of Mercury.	
70	2.M.		Nov. 1. Wright, from I. 8.		1	9	3 1-2d	7	3	34	12	Vid. 13.
87	2.M.		— 2. Tarling, from I. 7.			40	10	5	2	47	10	
250	3.M.		Mar. 3. S. Robison, from II. 1.			13	7	10	7	17	7	
70	1. S.		May 4. Williams, from II. 9.			6	2 1-3d			21	5	
42	1.M.		June 5. Keyfal, fr. III. irr. case.	1	1	13	2	5	2	21	3	V. 14.
D.	2.M.		— 6. Ruffen, from II. 10.			12	3	6	3	26	3	
120	1. S.		— 7. Wills, from III. 8.	1	1	42	7	7	2 1-3d	56	10 2-3ds	V. 15.
180	2. V.		July 8. Bush, from III. 9.			19	7	8	3 1-3d	41	10 2-3ds	
140	3.M.		May 9. Pearce, from I. 9.			80	18	5	2 2-3ds	80	18	
365	1. S.		Aug. 10. John — method unkn.			10	2 2-3ds	4	1 1-3d	20	2 2-3ds	
D.	2.M.		— 11 Mrs P. fr. III. irr. case.			28	7	12	4	42	10	
220	2.M.		— 12. Ashton, from II. 7.			22	2 2-3ds	5	2	46	3 1-3d	
270	2. V.		— 13. Wright, from 2. of IV. 1.			18	9	6	2 2-3ds	38	5 1-3d	
150	1. S.		Oct. 14. Keyfal, from 2. of IV. 5.			13	2 2-3ds	9	2 2-3ds	38	5 1-3d	
250	2. S.		— 15. Wills, from 2. of IV. 7.	1	1	9	2 2-3ds	11	3 1-3d	27	3 1-3d	V. V. 1.
180	2. S.		— 16. Roebuck, from IV. 7.			12	4	11	4	34	4 2-3ds	
90	2. S.		Nov. 17. Young, method unkn.			8	2 2-3ds	7	2 2-3ds	26	4	
130	3. S.		— 18. Lewis, from IV. 11.			23	5 1-3d	15	5 1-3d	44	8 2-3ds	
200	2.M.		Apr. 19. Burrows, from IV. 18.			21	4 2-3ds	6	2	35	6	
250	2. S.		— 20. Hubber, from IV. 10.			10	2	7	2	38	4 2-3ds	
177	2.M.		— 21. Miner, from V. 2.			18	2	6	2	48	5 1-3d	

{	Not cured,	-	0	}	Cured,	17	}	Total.
					Not cured,	4		

In the 1st Stage,	{	Cured,	-	-	}	3	}	5
						2		
2d Stage,	{	Cured,	-	-	}	11	}	13
						2		
3d Stage,	{	Cured,	-	-	}	3	}	3
						0		

*Averages of a Course.*

		Days.			Drams of Mercury.
In 17 cured,	-	$37\frac{3}{4}$	-	-	$7\frac{1}{4}$
In 4 not cured,	-	$34\frac{1}{2}$	-	-	$7\frac{1}{4}$

*Averages of the Removal of Symptoms.*

	In Days.	By Drams of Mercury.
General average,	$20\frac{1}{4}$	5
In the 1st Stage,	$16\frac{3}{4}$	$3\frac{1}{3}$
2d Stage,	$17\frac{1}{4}$	$4\frac{1}{2}$
3d Stage,	$38\frac{3}{4}$	10

METHOD

METHOD V. *Plummer's Pills: Decoction of the Woods.*

Number of days standing.	State.	Degree.	Names.	Result.		Symptoms disappeared.		Evacuations. Spitting began.		Course.		Reference.
				Not cured.	Relapsed.	In Days.	By Scruples.	In Days.	By Scruples.	Days.	Scruples.	
300	2. S.		Dec. 1. Wills, from 2. IV. 15.		1	53	3 1-2d	7	3 1-2d	43	7 1-2d	
120	2. M.		Jan. 2. Miner, from IV. 13.	1				22	12	57	17 1-2d	V.2. of IV. 21.
				Cured,						0		}
Not cured, Relapsed,				-	1 1	} Not cured,				2		

*Average of a Course.*

	Days.	Scruples of Pill.
In 2 not cured,	50	12 $\frac{1}{2}$

N. B. It was not intended to raise a salivation in either case.

*Summary of the Tables of Lues Venerea.*

	Cured.	Not Cured.	Symptoms removed in Days.
METHOD I. Van Swieten's solution of sublimite,	8	4	22 $\frac{1}{3}$
METHOD II. Sublimate rendered acrid, -	6	4	35 $\frac{3}{4}$
METHOD III. Sublimate rendered acrid ; warm bath ; decoction of the woods, - -	8	2	28
METHOD IV. Mercurial frictions, and warm bath, PART II. of IV. Where some other method had been previously tried without success, -	20	5	23
METHOD V. Plummer's Pills: Decoction of the woods, - - - -	17	4	20 $\frac{1}{4}$
	0	2	

N. B. The Author has never had it in his power to make any trial of the sarsaparilla, which were sufficiently accurate for publication.

*Query.* As the 3d method (sublimate rendered acrid, and the warm bath) appears to have been attended with the fewest relapses, and as the fourth (mercurial frictions and warm bath) was never found to fail in removing the symptoms for the present time; might not a judicious combination of these methods, at least, merit a trial? the 4th method being used for three weeks, or longer, if the symptoms did not give way, and the third being afterwards pursued for a fortnight, or longer.

I have not intruded the above cases of lues venerea upon the public, with a view of drawing any conclusions respecting the different methods of cure therein made use of. I am sensible their number is by no means adequate to such a purpose. My sole intention was to support an attempt which I think every individual of the Faculty is bound to make, towards drawing his profession out of that state of uncertainty in which it still is, with respect to one of the most interesting points, I mean the effects of medicines. How far ingenious theories, and subtile disquisitions have tended to throw light upon the nature of diseases, and the operation of remedies, may be difficult to determine:

Those

Those who are disposed to be satirical, allege, that we have changed our theories as often as we have our fashions ; and that, nevertheless, men in all ages have seemed as perfectly satisfied with the infallibility of the present theory, as they were with the superiority of the present cut of their coat. Politeness obliges us to suppose, that the theories of this age will be more immutable. Such, however, is the inconsistency of human nature, that the most strenuous opposers of dogmatism might probably be detected every minute, in making use of some degree of it, though almost unknown to themselves ; and I imagine, that a pure empiric will as rarely be found among men of sense and learning, as an Atheist will be among philosophers. If we next turn our views towards observation, and examine what assistance we have derived from it upon the present subject, I am afraid we shall find it far short of what might have been expected. It is well known, that as long as mercury has been in use, the comparative superiority of its different preparations is so far from being ascertained, that the most opposite opinions have been entertained by the first authorities, even with regard to the same preparation.

tion. Almost as much might be said of antimony, opium, hemlock, neutral salts, the different methods of blood-letting, and, in short, of the generality of remedies. It is difficult to find, not only two nations, but even two individuals in the same village, who have precisely the same opinions of the virtues and efficacy of a remedy. If we endeavour to trace the source of this contrariety of opinions, this reproach to medicine, I believe, we shall find none more obvious than the fallacy of observation, arising from mens drawing decisive conclusions from the limited number of experiments which they may have had it in their power to make. The irregularities of a patient are industriously concealed from his Physician: Pride, shame, fear, or other motives, often cause him to hide or misrepresent the true cause or nature of his complaint: If he is disgusted with a nauseous medicine, he will suppress its good effects, or perhaps unjustly ascribe bad ones to it: Defects in the quality of the medicines, diet or air, and the complication of other diseases, perhaps not always obvious; are all circumstances that daily defeat attempts towards observation and experiment. When the most efficacious remedy is  
given,

given, it is a chance that one or other of these causes frustrates its effects ; and if, by some of the unaccountable, though not uncommon caprices of fortune, this should happen several times successively to a practitioner, he becomes disgusted, and (not having it in his power to know the real cause of his want of success) finds himself little disposed to risk his reputation, or expose himself to further disappointments, by persisting in the use of a remedy which has repaid him so ill. On the contrary, an effort of nature, or a concurrence of lucky circumstances, may occasion virtues to be attributed to a remedy which it never possessed. Every candid observer, I believe, will allow, that this is often a true history of the peculiar, and sometimes extraordinary, opinions of practitioners. As long as there is no public repository of facts, nor any channel by which they might be conveyed to the world, so long will medicine probably labour under the imperfections we have been endeavouring to describe ; for I believe it will readily be acknowledged, that in the proportion that experiments increase in number, in the same proportion are they set out of the reach and influence of the above mentioned casualties.

It follows, therefore, that solid and invariable conclusions upon any subject, can only be drawn from a very large number of experiments or observations. If this position be true, and its utility universally acknowledged, nothing, I should imagine, can be easier than the means of bringing it into effect. With respect to military hospitals, all that is requisite is an order for that purpose: A yearly register of any form could then be given in by each general and regimental hospital. As to the public hospitals and infirmaries, now so common in every part of Great Britain, it is to be supposed, that a zeal for the improvement of medicine, and humanity to their fellow-creatures, would induce the heads of each to keep exact registers, and to make regular publications of them. Perhaps the mechanical regularity that such institutions would introduce into hospitals, might not be entirely void of its share of advantage. Besides the immense fund of observation which would be found in the military and civil hospitals, it is further to be hoped, that private practitioners, sensible of the advantages of such an institution, and having at length a known channel to convey their observations, would greatly enrich the collection.

collection. It is almost needless to mention, how beneficial such a plan must be to gentlemen entering on the practice of medicine, who, often distracted by the contrariety of opinions, know not which to chuse, and are obliged, at last, to reap knowledge in the tedious and limited path of their own experience, encompassed by deceptions, and disgusted by disappointments. It must be observed, that in ascribing all the opposition of assertions, and peculiarity of opinions, to the single source of the fallacy of observation, we have considered men as not actuated by prejudice, obstinacy or caprice : That their practice is sometimes influenced by these motives, we must be obliged to acknowledge, and I hope it will appear as evident, that the public establishment of facts would greatly tend to check such improper influence. In such registers, the chief requisites seem to be, *1st*, To throw the different means of cure employed into a certain number of methods, so that they may be conveniently compared together. *2dly*, To record the principal circumstances in the cure, in so concise a manner, that they may not exceed the bounds of a table. How far these purposes are answered by the above tables, I will

wil not pretend to determine: All that I will say concerning them is, that it was the first form that happened to occur; and that, though I have found it sufficiently convenient, I am sensible that it is capable of great improvements. It will undoubtedly be objected by some, that the great variety in different cases, requires a variety in the methods of treatment; and that this must be an insurmountable objection to arranging the different methods of cure, and reducing them to so small a number, that comparisons may be drawn between them. To this it may be answered, That though we now and then meet with irregular and complicated cases, in which the method of cure must necessarily evade every attempt to reduce it to any head, yet these are by no means so common as might at first sight be imagined; and as the practice of medicine is becoming every day more simple, the difficulties on this head must, of course, diminish. I am confident, that there are few chronic diseases that might not be subjected to such a plan; and, with respect to cases that could not, with precision, be reduced to any of the general heads, they might be comprised under the title of the *irregular cases* of that disease.

Such

Such a plan I have, for my private satisfaction, adopted for some time past; and though I have never met with any thing of the kind, from which I might draw assistance or direction, I have not found such difficulties in the prosecution, as could be said to balance the advantages which I soon perceived I should reap from it. I cannot help observing one circumstance in its favour, which is, that the simple statement of a set of facts, seems always to carry stronger conviction with it, than the most positive assertions of men even of the first repute: At the same time, it would be very unjust, to say that this prejudice was always well founded. I should imagine, that the collection of observations would be conducted with more regularity, and to much greater advantage, were all the hospitals of each kingdom put under the inspection and direction of their respective Colleges of Physicians, so far as that the latter might be authorised to issue orders for the trial of such remedies, and conducting of such experiments as might seem most necessary to them, for the improvement of medicine. We might then hope to see the pharmacopœias quickly weeded of their useless articles, whilst the virtues

tues of every truly valuable remedy would be publicly known, and established upon the most incontestible footing: With regard to those of an intermediate rank, we would at least have the satisfaction of knowing exactly, what degree of dependence was to be put upon them; and could even, were it necessary, calculate to the greatest nicety, what were the chances of success. If tables were judiciously arranged and executed, I do not believe that even very numerous observations, given in a detail similar to the above tables of intermittents or lues venerea, would exceed the bounds of publication; but if that should be found to be the case, the result of the whole might alone be given, as is done at the end of each of these tables.

I shall, in the next place, make a very few remarks on the dysentery, a disease which I have had considerable opportunities of seeing. From some accidents, needless to mention here, I have it in my power to give only a trifling number of cases, and which, indeed, seem to point out little or nothing. As, therefore, the following assertions are not supported by facts, the reader is welcome to place what degree of confidence in them he pleases. In general, I shall observe,

1<sup>st</sup>,

1<sup>st</sup>, That I have never been so lucky as to reap any advantage from opiates given by the mouth, though I have made long and repeated trials, and though I have given them, not only alone, but also combined with ipecacuanha, or with astringents, as in the pulvis e bobo compositus et species e scordio, rhubarb likewise being sometimes added. Whilst the stools were in any considerable number, and there were any remains of painful symptoms, I found small doses of ipecacuanha more effectual; and when the state of the disease was different from this, I found astringents alone the best remedies, beginning with mild ones, and ending with tinctura corticis Peruviani. I have, however, experienced great benefit from starch glysters, with laudanum, their effects being often surprising, particularly when the rectum was principally affected, and the tenesmus violent: Their only use was, however, as far as I have been able to discern, in recent cases. 2<sup>dly</sup>, With respect to purgatives, I have thought rhubarb and calomel the best; for although cathartic salts sometimes procure a more free, speedy and plentiful evacuation, yet I have had suspicions, that by their sedative and refrigerant properties, they weaken  
the

the tone of the primæ viæ, and tend to prolong the disease, at least when it is necessary to repeat them often. 3dly, Although the vitrum ceratum antimonii is frequently of great service in recent cases, yet the most remarkable effects that I have experienced from it, were in those of some standing, where I have often seen it succeed after many other things had failed. It is true, that in persons with red hair and thin skins, it sometimes operates rather roughly, but nevertheless safely, as far as I have seen, provided the dose is managed with caution. I am much inclined to think, that it is liable to considerable uncertainty in strength, from circumstances not only in its preparation, but likewise in the preparation of the glass. To this, I imagine, must, in a great measure, be owing the different opinions that have been entertained of it at different times, and by different persons; some speaking of it as easy and safe in its operation, whilst others look upon it as a rough and dangerous medicine. From what I have seen of it, I think it deserves a stricter enquiry into its preparation and effects. 4thly, I have found small doses of ipecacuanha of great use in the beginning of the dysentery; but towards the

the end of the disease, and in chronic cases, it certainly is not equally efficacious: I have often known it gripe; and when the stools were reduced to the number of three or four in twenty-four hours, I have had reason to believe that it retarded a perfect cure. *5thly*, With regard to astringents, I have never had such a sufficiency, either in variety or quantity, as to enable me to make any experiments worth mentioning here. I can therefore only observe, relative to the tincture of the bark, that however free the patient might be from gripes or tenesmus, the intestines would seldom bear it, till the stools were reduced to two or three in twenty-four hours. As persons in this disease are very subject to relapses, on changing their diet, it is often necessary to continue the tinctura corticis for some days after the belly is become quite regular, in order to restore the tone of the intestines. *6thly*, The irregularities of patients in this disease, in which diet has the utmost influence, render observations very difficult, and conclusions very doubtful.

In the following tables, I have arranged the different means of cure employed, under four separate methods. In the first table are found what I  
have

have called the *regular cases*, viz. those in which only one method was used throughout the course of the disease. The mark of each method is placed at the head of the column, and refers vertically. The figure of the number of days that the method was continued, refers horizontally. In the second table, I have placed what may be called the *comparative cases*, viz. where, in the course of the disease, it was found necessary to change the method. In this way, any means of cure that a practitioner may be desirous of trying, may be comprehended in a method, and a separate column assigned to it, by which its success will soon be seen. By comparing the first and second tables together, the success and failure of each method will be determined. In these tables, they were never noted as cured, until they were reduced to one stool in twenty-four hours, unless when the person was accustomed to have more whilst in health, which was very rare.

*Register*

*Register of twenty Cases of Dysentery.*

*Table I. Regular Cases.*

*Table II. Irregular Cases.*

November. December. January.	I.	II	No. of days cure.	III.	IV.	Unsuccessful Method.	Names.	Successful Method.
						Method. Days used.		Method. Days used.
	2		5			I. 15	Wood.	III. 6
		4	10	I	I	II. 22	C. Brown.	III. 6
			15	3		II. 20	Earp.	IV. 5
			20	1		IV. 16	Frisby.	II. 18
			25			IV. 19	Bobbit.	II. 12
			30	2		IV. 13	Palmer.	II. 24
Total cured	2	4		7	1			
Average of the number of days re- quired for a cure.	5	7 $\frac{1}{4}$		18	7			

*Remarks.*

Most of the patients in the second table were much afflicted with the disease, and subject to frequent relapses.

1st Method,	{ Cured,	0
	{ Not cured.	1
2d Method.	{ Cured,	3
	{ Not cured,	2
3d Method,	{ Cured,	2
	{ Not cured,	0
4th Method,	{ Cured,	1
	{ Not cured,	3

In the first table, the different methods placed at the head of the columns, refer perpendicularly; the number of days refers horizontally to both sides.

In the second table, the method which had failed is expressed in the first column, and the number of days that it had been used in the second; the patient's name is in the third column; the method that affected the cure in the fourth; and the number of days it was used in the fifth.

METHOD I. Emetics and cathartic salts, occasionally repeated; ipecacuanha in small doses; astringents.

METHOD II. Emetics sometimes repeated; cathartics of rhubarb and calomel, repeated every third or fourth day; ipecacuanha; astringents.

METHOD III. Emetics; doses of vitrum ceratum antimonii, every third or fourth day; ipecacuanha; astringents.

METHOD IV. Emetics; doses of vitrum ceratum antimonii, every third or fourth day.

N. B. Anodyne injections were occasionally used in all the four methods.

I cannot close these remarks, without adding a few words on the method of arranging diseases, which has, of late, deservedly engaged the attention of the public. I have often thought, that if the classes and orders were entirely expunged from a nosologia methodica, and nothing but the genera and species retained, the book, though less systematical, would be equally useful, and, at the same time, contain fewer inconsistencies. Although the genera and the species must be of the highest utility, for giving accurate distinctions of diseases, and affixing precise ideas to each term, yet I could never perceive, that the classes and orders served any other purpose than to perplex the author, to cause him to be guilty of absurdities, and to produce assemblages that never existed in nature.

ture. Without entering into the different methods that have been taken to class diseases, or into all the difficulties that have occurred, in constraining nature to put on a systematical regularity, for which she has given no foundation, and of which she is perhaps not capable, I will only observe, in general, that although this system succeeds pretty well in fevers, and some other diseases, yet there are many that seem to elude every effort of the kind. The rickets, the jaundice, the scrophula, and some others, seem to be individuals, totally unconnected with every thing around them, and only reducible to the definition of a class or order, by catching at some trivial circumstance in their phænomena. It must undoubtedly be allowed, that method, in all sciences, conduces greatly to assist the operations of the mind; for which reason, it may be very necessary to fall upon some form of bringing certain diseases into one point of view. If, as has been alleged, there is not in all cases a foundation in nature for assemblages, and that therefore we are obliged to form them in an arbitrary manner, we would certainly wish to be directed by utility, in the choice of a method. The principles upon which such assemblages

were to be made, might be, *1<sup>st</sup>*, Similarity in the nature and cause of certain diseases. *2<sup>dly</sup>*, Similarity in their method of cure. *3<sup>dly</sup>*, Similarity in their phænomena. With respect to the first, as long as our theories remain in the same uncertain and fluctuating state in which they have been hitherto, it will be in vain to expect a steadiness and permanency from a superstructure, which is destitute of foundation. The same objection lies against the second. Whilst the phænomena of diseases remain the same, so long will there be, in some cases, a foundation in nature for the third method. Diseases that are most liable to be confounded, being brought together, will more readily admit of a comparison; and, I believe, most practitioners will admit, that, to distinguish and determine the disease, is often the most intricate part of their office. It will perhaps be alleged, that the associating of diseases, by a similarity in their phænomena, is neither more nor less, than the method that is followed in every nosologia methodica. To this it may be answered, that in the classes and orders, there are several of the subdivisions so far from being in danger of being mistaken for each other, that they do not agree.

agree in any circumstance, except some trifling one, which is laid hold of merely because it enables them to come under the general definition. If, instead of this, assemblages were formed of diseases which resembled each other, in several of their essential and most striking symptoms, and when such similarity was wanting, no assemblage was attempted, the form would certainly be more agreeable to common sense. I imagine, that such assemblages should rather be treated of under the same *chapter* or *section*, than comprehended under the title of a *class* or *order*; the latter implying a necessary connection in nature, whilst the former has no such import, and is not restricted to the same regularity. This proposal may appear very trivial; but it should always be remembered, that inaccuracy in words tends to produce inaccuracy in ideas, and that it is as easy to make use of a proper term as of an improper one.

I shall now finish these remarks with this apology, that if they are found to contain many defects, and if things are said in them that may have been said before, it is to be hoped that some allowance will be made for an author, who, for these last thirteen years, and ever since

he left the schools of medicine, has been almost entirely cut off from all communication with the literary world.

### III.

*A curious Case of a very remarkable and surprising Recovery in a private Soldier of the second Battalion, 73d Regiment, serving in Gibraltar, 1781,—attended with a Fracture of the Cranium, requiring the Trepan,—a compound Fracture of the lower Extremity, requiring amputation,—and several other wounds. By Mr Andrew Cairncross, Surgeon to the second Battalion, 73d Regiment.*

**D**ONALD ROSS, aged thirty-nine years, was standing sentry in the King's lines, in the night of the 17th September 1781, during a very heavy cannonade and bombardment, both from the Spanish lines, and also from their gun and mortar-boats in the bay, when he was knocked down by the wind of a thirteen inch shell, which fell close by him: The shock and fear had such an effect upon him, that he was rendered entirely incapable of making any efforts to save himself by running away: The  
fuze

fuze burnt only a few seconds, when the shell exploded. He was soon after taken up senseless by some of the guards, in a miserable mangled condition, by the splinters of the shell, and pieces of stone thrown about; and he was conveyed in a litter to the hospital of the 73d. When brought there, his appearance was so shocking, that I really was almost at a loss what part of his body to pay attention to first; not apprehending that I could by any means whatever save the poor man's life: There was an wound on his forehead, just above the orbital process of the right eye, extending in a line upwards, and, with the point of my probe, I could plainly perceive the bone bare and fractured. There was a compound fracture of the left arm, a little above the insertion of the deltoid muscle; the bone was broken very obliquely; and lower down, about three or four fingers breadth above the elbow, there was a simple one. At times he was seized with severe spasms, and during that period, the arms, in consequence of the action of the muscles, almost made an acute angle between the joint of the shoulder and elbow. There was also a compound fracture about the middle of the lower extremity of the same side,

both bones broken very much, with several loose splinters, and which suffered equally with his arm, during his former agitated state. A great part of the skin and muscles were lacerated from three of his fingers of the right hand, and the bone of the middle one was shattered to pieces. His body was contused all over; the scrotum and penis particularly so. The British regimental surgeons assisted me; and indeed we were all of opinion, that the unfortunate man could not live; at all events, could not undergo so many operations as it appeared necessary to perform upon him. Unwilling, however, that any thing should be left undone, as the wound on the forehead seemed more immediately to affect his life, I resolved upon removing the integuments from that part of the os frontis, to examine the state of the injury there. On laying the bone bare, I found a fracture running about an inch and a half upwards in the direction of the wound; and there was a particular *dint* in the lower part of the bone, which seemed to be the point struck. No time was lost; the trepan was immediately applied on the part; it cut well; the sawing was complete, without injuring the dura mater, and was removed easily by the elevator.

On

On examining the bone removed, the fracture did not extend through both tables, only the outer one ; but a *thin lamina from the inner table was found wanting*. On wiping away a little extravasated blood from the surface of the dura mater, the bit of bone was found drove through the membranes into the brain, and sticking fast : It was immediately removed ; on which a pretty considerable hæmorrhage ensued, and was permitted to flow freely, so as to take away about ten or twelve ounces ; it was afterwards easily stopt by the application of dry lint. At that time, he had a severe spasm, which did not last long, and began to know me and the people about him. The other gentlemen assisting, concurred in opinion with me, in deferring any other operation for the present, as the most material injury had been attended to : His wounds were dressed lightly, and a stool was procured by a glyster.

On calling next morning, September 18th, to enquire if he was in life, to my surprise I found that he had slept well from the time I left him in the night, was perfectly sensible, and not suffering any great degree of pain ; his pulse was exceeding good, and not more than seventy. The position of his leg  
and

and arm being altered in the night, and not pleasing me, was put to rights. Saline draughts were prescribed for him through the day, with thirty drops of the thebaic tincture in the evening, and a glyster was desired to be repeated, if necessary. 19th, Every thing went on well: He had been at stool early in the evening, which was a work of much difficulty, on account of so many wounds; had rested well during the night; was clear in his senses; and pulse as before.

20th, A small alteration for the worse; pulse rather quicker, and skin hot; has had a pretty good night's rest, and a loose stool. Ten grains of nitre were now added to each dose of his saline medicine, with the opiate as before. 21st, Upon the whole much as yesterday; complains of a slight headach; the tension upon his leg and arm exceedingly trifling; belly continues regularly open. 22d, No quickness to be perceived in his pulse; headach, and heat of skin, gone off; belly as before; his hand smells pretty strong of suppuration; and there is an oozing upon the eighteen-tailed bandage upon his leg. 23d, Much as yesterday; removed as much of the dressings from his different wounds as would come away easily; the

the lint adhering firmly to the dura mater, was not attempted to be removed; the dressings from his fingers and hand came mostly off with ease: The lacerated teguments looked well, but there was no prospect of saving the middle finger, as the bone of the third phalanx was shattered to pieces, up to its articulation with the metacarpus: The wound in the arm was almost closed, requiring only a bit of lint with a small pledget of cerate above it; and the tailed bandage was frequently moistened with spirits and vinegar, to disperse the ecchymosis, which was considerable. The wound of the leg had but an indifferent aspect; the discharge was bloody and ichorous, but without inflammation or tension upon the limb; and there was an utter impossibility of replacing the bones in an exact position, from some unforeseen obstacle: As there was no chance of cure here, but by amputation, or tedious suppuration, it was dressed in the most superficial easy manner. He continued free from fever and pain, and every thing went on much as before.

On the 26th, the 9th day from the accident, the lint came easily away from the dura mater, which looked well, and had begun to slough off. The wounds on his hand had also

also as good an appearance as could be expected. As the discharge from the wound in the arm was so small on the last dressing, the bandage was not now undone. From the above period, till the fourteenth day after the accident, the appearance of his different wounds continued much the same, and the granulations from the surface of the brain had a healthy aspect; but he then complained of an exceedingly acute pain in the middle of the fractured part of the limb, which made him start frequently: On examining it, a tension was found coming on fast; the discharge was still ichorous and bloody; his pulse was getting up: In short, I expected nothing but gangrene and its consequences to follow; and this now appeared to be the critical time to remove the limb entirely, as the only probable chance of saving the patient's life. On consulting with my brother surgeons, they all agreed with me in opinion, that it was so; and as no time was to be lost, it was determined to be done immediately.

As soon as the necessary apparatus was got ready, that I might not disturb my patient by placing him on a table, I took off the limb in the usual place below the knee, whilst he lay in bed in the hospital cradle.

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He bore the operation exceedingly well, all circumstances considered, and soon after fell fast asleep. On dissecting the amputated extremity, the tibia was found fractured quite through in a very oblique direction, the fibula into many pieces, and a pretty large splinter adhering to the periosteum, was wedged quite across the interosseal muscles, which in all probability was the obstacle to the reduction of the limb. He was exceedingly free from pain during the remaining part of that day, and had a good night of it, with tolerable rest: Next morning, I found him in good spirits, without any quickness of pulse; the appearance of his head and hand as before. The opiate was repeated in the evening, and every thing continued to go on as well as could be wished.

On the fifth day from the amputation, the supuration being established, the dressings were removed, the stump looked well, granulations were shooting fast out upon the ends of both bones, and there was next to no tension upon the skin, of which a considerable portion had been saved. The poor man was now exceedingly happy; said, he was sure he would recover, but wished his finger to be taken off also, as he could not bear to look at it. Every day afterwards added to  
his

his recovery, all his sores looking well, and the space in the cranium filling up fast. On the tenth day after the amputation, finding every thing so favourable, and that nothing but the removal of the middle finger prevented his recovery, which gave a good deal of pain all up the arm, and was very offensive to the smell, I yielded to his solicitation, and removed it at the articulation of the metacarpus. The inflammation subsequent was inconsiderable, and in three weeks it was perfectly cured. The other sores all kept pace in their cure, without any further material occurrence; and in ten weeks from the first date of the accident, he was perfectly well, but weakly.

## IV.

*Observations on Canine Madness, by Dr. Houlston of Liverpool, communicated to Dr. Duncan.*

**W**HEN men of undoubted professional knowledge, candour and humanity, stand forth to destroy the public confidence, in a matter of such moment as a preventive for canine madness, this can only be supposed to arise from

a thorough conviction of the inefficacy of the means proposed, and an ardent zeal for the cause of truth. Well aware that they are hereby depriving numbers of that great cordial Hope, and reducing them to a state of horror and apprehension, little short of that which they wish to guard against, nothing but a desire of obviating the fatal consequences of an ill grounded confidence, and of exciting the endeavours of men of science, to discover more certain remedies than are yet known, could induce them to take such a step.

Dr Fothergill, in the case of Mr Bellamy, and Dr Vaughan of Leicester, in three cases which he has published, have fully proved, that all the methods recommended for that end, are insufficient for the cure of the hydrophobia, when once commenced. The patients all died in the course of one or two days from the appearance of this symptom, notwithstanding the most attentive and judicious treatment. From these cases, they conclude, that no dependence is, in reality, to be placed on the Ormskirk medicine, before so much confided in; and they have each declared their opinion, how doubtful and uncertain, not to say useless, are all the  
other

other methods hitherto proposed, to prevent the ill consequences sometimes resulting from the bite of mad animals. The attempt, then, to recommend and enforce a plan of treatment, agreeable to reason, and supported by experiment, must meet with approbation, and may be productive of essential service to society. May it not very easily happen, that a remedy, the gradual exhibition of which may prevent the attack, would prove wholly insufficient for the cure of the hydrophobia? Or is the inference just, that because the action of mercurials, applied for three or four days at most, will not cure the disease in its last hasty stage, the same remedy would have been of no avail in the interval between the bite and the attack, which was (in these cases) of one, three, and nine months? During that period, a gradual and sufficient action of the mercury might have been excited; whereas, when the hydrophobia has appeared, there is scarcely ever time for any such effect. There is some reason to conclude, too, that under certain diseases, the system is less capable of being acted upon by mercury, which, though applied in large quantities, seems then not to produce its usual effects. I mean  
not

not to dwell upon the reasonableness of a practice, in which the action of the remedy is principally determined to the part where the virus chiefly exerts its baneful powers, *viz.* the salivary glands; nor yet upon the authority of the late Dr James, and the celebrated Sauvages, who have largely insisted on the beneficial effects of mercury, to prevent the dangerous consequences of the bite of mad animals. Not to swell this paper to an improper bulk, I propose only to give a brief account of a pamphlet, published at Paris by order of government, entitled, “*Méthode éprouvée pour le Traitement de la Rage,*” wherein we are informed of the success of a mode of treatment, of which mercurial unction is the basis and most essential part, laid down by *Monf. de Laffone*, first Physician to the King of France, and tried on eleven out of fifteen persons dreadfully bit and torn by a mad wolf, on the 8th and 9th of December 1775, within twenty-four hours of each other. Three of these unhappy people, trusting to powdered oyster-shells, and similar remedies of no use, were not subjected to this treatment, and died in a few days, raving mad; as did also a young woman, who did not apply for relief till two

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days before she died, and after the symptoms of hydrophobia had commenced. The remaining eleven were, by the States of Macon, near which place the accident happened, put under the care of a Physician of Cluny, Mons. Blaise; and the account he gives of the success attending the method of treatment pursued, of which a summary is subjoined, is as follows: One man, who, for ten days, exactly followed the plan laid down; whose wounds, though very large, suppurated well, and were in a good state, and in whom the mercury seemed to begin to act, became melancholy, was seized with a horror and dread of liquids, and died within forty-eight hours afterwards, though placidly in his senses, and without being convulsed. A second, whose mouth and gums had been slightly affected by the mercury, which he used near a month, grew delirious and furious, and, after experiencing the symptoms of hydrophobia for two days, died comatous. This man, however, it was found, had privately drank very large quantities of wine, for three days together, preceding his delirium; and, it is supposed, this contributed much to his death. A third, a boy, who continued the use of the mercurial frictions and antispasmodic medicines

medicines for eighteen days, and was doing well, being removed home by his friends, died there three weeks after, as is believed, only from the wound in his head not being taken due care of, and not from rabies, as he drank freely an hour before he died. The remaining eight recovered, although one of them, during the course, became sad and melancholy, and another, a woman, delivered of a child during the time, manifested an aversion to liquids. Salivation took place in most of them, upon which, gradually excited, (though they endeavour to guard against it by repeated purging), depends, most probably, in such cases, the only rational hope of security from canine madness. Dr Blaise adds, That “ the treatment was continued above a month, in the eight who “ got well\*, six of whom had been grievously

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\* In the History of the Royal Society of Medicine at Paris, Vol. II. we are informed by Mons. Blaise, that of these eight, one died with hydrophobia six weeks after he was discharged apparently well ; but it appears, that four days before this attacked him, he had passed his arm down the throat of an ox, believed to be mad, though the man is not said to have been bit by it. Mons. Blaise also mentions his having since successfully treated two other children in this method ; whereas a third, bit by the same dog, and not so treated, died mad.

“ bit in parts not covered with the clothes ;  
“ and that most of them experienced, nearly at  
“ the same time, symptoms of nervous affec-  
“ tions, which might be attributed to the virus  
“ too much attenuated and weakened by the re-  
“ medies, to produce a manifest accession of hy-  
“ drophobia.” He concludes with these judicious  
remarks: “ It is most certain, that the remedies  
“ we have employed have been very successful ;  
“ but they would have been much more so, had  
“ they been used early ; and particularly, if al-  
“ most immediately after the bite, those exter-  
“ nal means had been made use of, which ap-  
“ pear to me indispensably necessary, *viz.* deep  
“ scarifications, cutting away the lacerated parts,  
“ and those adjoining to the wounds, the cau-  
“ tery, applying cupping-glasses, and establish-  
“ ing copious suppuration, for a long time, in  
“ the part bit ; because it sometimes happens,  
“ that the saliva is lodged in the cellular mem-  
“ brane, where it remains, as it were, fixed and  
“ inert, till, brought into action by some cause,  
“ it enters into the circulation, affects the nerves,  
“ and produces the train of symptoms of this  
“ most terrible of diseases.” It now remains  
only to give the mode of treatment proposed,  
which

which I wish to do as concisely as I can consistently. After opening the body by laxative glysters, bleed once or twice, especially if there be any symptom of madness, or any wildness in the looks; use, morning and evening, for an hour, a warm foot-bath, or, if it can be had, a warm bath; wash the wound repeatedly and long in warm water, in which common salt, or rather sal ammoniac, is plentifully dissolved; making, at the same time, deep scarifications, cutting away lacerated parts, or, which is preferable, (when it is an animal which is bit), applying the actual cautery: This done, rub a dram of mercurial ointment lightly round about the wound, which may be dressed twice a-day, with basilicon or digestive, washing it each time with the salt and water. The mercurial ointment, however, is only to be applied once in twenty-four hours, and in the above dose. The body must be daily kept open by glysters, to which add one spoonful of honey, and two of vinegar; every four or five days, a gentle purgative is given, to prevent salivation. To excite vomiting once or twice, will be of service, especially at the first, if there be frequent nausea or inclination to vomit. Once, or if no in-

convenience follows its use, twice a-day, morning and evening, give a spoonful of wine, with twenty or twenty-five drops eau de luce, to promote a gentle sweat. Let the patient take every day four grains of camphor, two grains of musk, and six grains of nitre, made into a bolus, with honey. In case of great restlessness and want of sleep, give, in a moderate dose, an opiate; but do not repeat it several successive days. The patient ought freely to use diluting drinks, mixed with honey and vinegar; but should the hydrophobia already have come on, these and the foregoing medicines may be administered in glysters. The food should consist chiefly of vegetables; but milk is to be avoided. This mode of treatment must be continued till the wound is healed firmly; a month at least, and longer when the wounds have been considerable, or any symptoms have manifested themselves. Should the wounds put on a bad appearance, give the bark in strong decoction; and also when great weakness and languor remain. Useful animals, when bit, may be treated nearly in the same manner, only a triple quantity of the mercurial ointment should be employed. They should be kept from mixing

ing with others ; and, on the appearance of any symptoms of madness, they should be immediately destroyed ; as ought also dogs, and animals of less use, without hesitation. Thus far Dr De Laffone. Several strong proofs of the success attending the use of mercurial friction, are inserted in the second volume of the Memoirs of the Paris Royal Society of Medicine, of which the instances given by Mr Odoardi deserve particularly to be noticed. Of nine persons bit by a mad wolf, one (treated by another surgeon, but not with mercurial frictions) died of the hydrophobia the forty-sixth day after. The eight other, who used this remedy under that gentleman's care, all did well. He mentions several instances which have fallen under his care or notice, in which mercurial frictions on the wounded part have preserved the patient from all danger, sometimes without producing salivation. Notwithstanding this success, however, he also esteems it the surest method to excite a slight degree of salivation ; and perhaps this will be found to answer best, when attempted soon after the accident, and brought about not too hastily.

## V.

*History of a Case of Rheumatism, cured by Electricity. By Dr Simon Lanphier, Physician, Waterford.*

**M.** A. aged fifty-eight, a woolcomber, in the month of December 1778, was affected with a coldness and shivering, succeeded by heat and partial sweats, pains of the shoulders, extending to the elbows, wrists and fingers, attended occasionally with redness and swelling. His hips, thighs, and legs, were soon attacked in the same manner, but were particularly painful at the joints of the knees and ankles, appetite impaired, thirst moderate, bowels tolerably regular. By the advice of his friends, he had recourse to a variety of matters, particularly warm porter, brandy and water, and sulphur, all with a view of promoting sweat. After the ineffectual use of these for some days, he applied to the late Dr Backas, an eminent Physician of this place, who ordered him turpentine drops, with some other medicines; but, in consequence of the sudden death of that gentleman, he did  
not

not experience the benefit of his advice that he otherwise might have expected.

He sent for me on the 4th of August 1779, about eight months from the commencement of his complaint. He was confined to bed, could not sit up, or put on his clothes without assistance. He then complained of pains in his shoulders, elbows, wrists and fingers; pain in the small of the back, extending occasionally to both hips; considerable swelling of the knees and ankles, attended with excruciating torture; he was easier lying in bed than in any other position; pains not aggravated by additional heat; appetite extremely delicate, in consequence, as he supposed, of having taken garlick for some days; no material thirst, except at intervals; bowels regular; pulse rather frequent, but not full or hard. After premising the warm bath, and a strict attention to vegetable diet, I ordered him, on the 5th of August, thirty grains of Dover's powder; at the same time, directing that he should lie in blankets, and forward sweating, by keeping quiet, taking occasionally draughts of white-wine whey; and every second hour a julep, with spiritus mindereri.

6th, Sweated profusely, from ten in the morning until six in the evening; pains easier for  
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some hours whilst sweating, but returned as violent as before. 8th, The medicine repeated, and with nearly the same effects. On the 10th, he was ordered a mixture with equal parts of elixir guaiacinum volatile, simple syrup and mucilage of gum arabic, a large spoonful of which to be taken night and morning, washed down with wine-whey. This promoted sweating, which was not a little increased by the addition of some volatile spirit of sal ammoniac. The pained parts were gently rubbed morning and night, with camphorated oil and spiritus cornu cervi. In the course of ten days, he found himself better, was able to get out of bed, and assist in putting on his clothes: The pains, without any obvious cause, returned, and were extremely troublesome. Blistering plaisters were applied to the shoulders, with directions to remove them as soon as they became painful; next to the elbows and knees, which experienced great relief from their application. The medicine was still continued. Notwithstanding its use, and the occasional application of blisters to the parts principally affected, a strict attention to warmth and regularity, on the 5th of September following, his recovery seemed very doubtful; I was therefore

therefore determined to try what effect might be produced by electricity, having given him directions to lay aside the elixir guaiacinum.

On the 10th of same month, a few slight strokes were sent through the parts most affected, which were the shoulders, elbows, wrists, and joints of the fingers; the shocks were repeated three times weekly, but seemed rather to aggravate his disease. A temporary relief was experienced during the use of the application; but matters appeared worse at the succeeding visit. However, as I have known the same effects ensue upon first using electricity, I determined to persevere and not repeat the operations oftener; but, to put it to a greater extent in point of strength and number of shocks, I also insulated him, and by that means took large sparks from the pained parts; at length the swellings began gradually to disappear, and were even sensibly less in any one part, when electrified for some minutes, either by drawing sparks from the part, or sending small shocks through it. Immediately after the use of electricity, he could move much better than before, and acquired so much strength as to walk tolerably well without any assistance.

I should have observed, that for many days, on his first visiting me, he was obliged to be attended by two assistants. In the month of February 1780, he was able to comb a ball of wool, which he had not done for near fifteen months before. The electricity was continued until the April following, when he found himself well in every respect; the pains removed, and natural heat of the parts perfectly restored. In order to prevent a relapse, I ordered him to use the cold bath, which he began in June, and continued until August. He is now extremely well, and works at his business as usual.

I have lately had frequent opportunities of trying electricity in old rheumatic complaints, particularly where the pain was confined to one or two parts, and have always experienced the greatest advantages from its use. The above case shews the good effects of electricity in a most troublesome and painful disease, and, at the same time, indicates, that much may be expected from it, even where the internal remedies have proved ineffectual. A chronic rheumatism, which is considered as being in a great measure a local complaint, I am satisfied, will frequently be removed by its use.

## VI.

*The History of a Case, where the Pharynx was wounded through the Muscles and Membranes which connect the Larynx and Os Hyoides, without proving fatal. By the late Dennis Ryan, M.D. Communicated in a Letter to Samuel-Foart Simmons, M. D. F. R. S. Physician in London, and by him to Dr Duncan.*

A NEGRO, named Harry, who lived as watchman on Winchester estate, near this place, was surprised in the night, about the end of last February, by two negroes, with an intention to put him to death. He is about thirty years of age, and of a slender habit of body, with a remarkably long neck; and, his being sickly for some time, rendered all the resistance he could make of little effect. From the present appearance, they seem to have made several thrusts or incisions with a knife, between the upper edge of the right side of the thyroid cartilage and the os hyoides. One incision was made transversely. It began below, and opposite to the middle of the base of the os hyoides, and extended almost as far the right carotid.

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It seems to have totally divided the sterno-hyoidæus and hyo-thyroidæus muscles. This incision was crossed by another, which was made in a longitudinal direction. Where both meet, there is a considerable orifice, into which one might easily introduce the top of the little finger, three weeks after the accident happened, when I first saw him. And, upon my removing the dressing, which consisted of a coarse rag, and some oat-meal and water, there was discharged a great quantity of mucus through the wound, the edges of which had now become callous all round. On his attempting to drink some water, the most part of it rushed out by the orifice; but when it was closely stopped up, by the application of another's hand, he swallowed pretty freely, though not without some coughing. It is always necessary to make a pressure of this kind, when he takes any food. I had his mouth and nostrils closed for some time, but he breathed through the wound. The orifice has of late become so small, that it has been thought proper to enlarge it by an incision, to allow a free passage for the mucus, which is discharged from it very copiously. When he holds up his chin a little, the thyroid cartilage is about  
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an inch and a half distant from the base of the os hyoides, and about three-fourths of an inch, when he attempts to swallow any thing. The attack was made on him in the beginning of the night, and he lay till morning exposed to the night air. He was then found, with a piece of blanket wrapped about his neck. Those who first saw him, say, that the loss of blood he sustained was very trifling. They gave him some drink, but it all came out through the wound; and they, as well as he himself, declare, that till the thirteenth day after the attack, he swallowed nothing whatsoever. Hence he was almost totally exhausted, and his situation thought so desperate, that recourse was had to none of the means usually employed in such circumstances, in order to support life. From the time he began to swallow, he has gradually recovered some strength, and he can now eat plantains, the chief fare of negroes. He walks about tolerably well; and though he breathes in general with some difficulty, he will probably live for some months, and afford a striking proof of the powerful efforts of nature, without the assistance of art, even in the most dangerous circumstances.

## VII.

*Account of the successful Operation of the Trepan on the left Temple, with the Extraction of a Splinter of Stone, penetrating the Dura Mater. By Mr George Borthwick, Surgeon, 14th Regiment Light Dragoons.*

**A** DRAGOON of the 14th regiment received a blow from a sharp stone on his left temple, which gave him a considerable wound, and knocked him down. He soon recovered himself, and walked without assistance to his barrack, which was a quarter of a mile from the place where he met with the accident. On examining him, about an hour after he received the blow, I discovered a wound in the teguments and temporal muscles, of two inches in length, the wound being in the direction of the fibres of that muscle; and, by my finger, without the help of a probe, could plainly discover a fracture of more than an inch in length, with a considerable depression in the temporal process of the os frontis. The course of the fracture was in the direction of the fibres of the temporal muscle.

Finding

Finding matters thus circumstanced, I removed such a portion of the skin, tendinous aponeurosis, and temporal muscle, as I reckoned would be necessary for allowing the crown of a middle sized trepan to be applied; and having removed a sufficient portion of the pericranium, to enable me to examine fully the extent and nature of the fracture and depression, and to allow the operation to be performed, I discovered a fracture of near two inches in length, and the depression so very considerable, that the end of a common sized blunt-pointed probe could easily be introduced obliquely through the fracture, under the cranium. This being done, I immediately took out a circle of bone with the trepan, which enabled me to remove entirely the depressed fragments of bone, amounting to four in number. There was no extravasated blood found on the surface of the dura mater, (though this membrane was entirely separated from that portion of the skull which constituted the depressed fragments); but on removing the circle of bone with the trepan, I discovered a small wedge-like stone, thicker than a shilling, of the size of a silver three-penny piece, that penetrated the dura mater obliquely opposite to the

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fracture, and had insinuated itself under that part of this membrane, from whence the circle of bone was removed, and had, no doubt, been broken off from the stone with which the blow was given.

During the scalping, several branches of the temporal artery were necessarily divided, which made the needle and ligature to be frequently used, and the removal of a portion of the temporal muscle, particularly in this tumefied state, made the operation have a more formidable appearance, than in these parts of the cranium where it is more frequently performed.

After the operation, the wound was dressed in the usual manner, and the patient recovered without any bad symptoms supervening, and was perfectly well in ten weeks.

I think it proper to add, that in a few hours after the operation, the patient complained of a great stiffness in the under jaw of that side; but it did not increase to such a degree as to prevent his being able to admit a table-spoon into his mouth. It continued, however, for the space of a week, and then went off. If the operation had been performed in any other part of the cranium, I should have been alarmed at the stiffness

ness of the jaw ; but in this case, I attributed it to the inflamed and swelled state of muscular fibres of the temporal muscle ; and the event shewed, that as soon as a proper suppuration had time to come on, the inflammation, and, of course, the swelling, ceased, and the stiffness was at an end.

Was this event the sooner brought about, from his having taken every night three grains of opium, during the first fortnight after the operation ?

## VIII.

*The History of a Case of Hydrocephalus, successfully treated by the Use of Mercury. By Dr Alexander Eason, Physician, Manchester.*

ON the 12th of September 1781, I was desired to visit John Norman, a child of two years and a quarter old. His mother informed me, he had been in an indifferent state of health for some time past ; and that, during the three last weeks, he had convulsive fits so frequent, and often of an hour's continuance, both by day and night, that she hourly expect-

ed his death. I found him lying on a pillow, supported by his mother's knees, quite stupid; his eyes sometimes open, but more frequently half shut; the pupils greatly dilated, and he was incapable of directing them to any object. Being unable to support his head, it fell to either shoulder, or behind, according to its inclination; the size nearly equalled that of an adult; the fontanelle open, the sutures closed, and I think the bones were thicker than usual; the back part of the head was very large, in proportion to the fore part. When he was moved, or held up, he was generally seized with a fit. A cough of some months standing was now more troublesome, and resembled a convulsive one. His feet were cold, and frequently had an œdematous appearance. His pulse was quick, small, and irregular. He was greatly emaciated, and the very small quantity of food he took was frequently thrown up.

From these symptoms, I had very little doubt that his disease was an hydrocephalus internus, and no hopes of his recovery, under such circumstances, could be entertained.

As the infant was in so low a state, I thought it most prudent to proceed by slow degrees in  
the

the use of mercurial medicines. At first, he took a few grains of rhubarb, then one grain of calomel every night at bed-time, and on the fourth day, a few grains of rhubarb, as at first. After an interval of two days, he took three grains of calomel every night; but during the first week his symptoms grew worse; the parietal bones plainly appeared larger; the head measured more in circumference, and the fits continued as usual. He then took the calomel every night, with a tea-spoonful of oxymel of squills, twice or three times a day. This gave him about two stools in twenty-four hours. No great alteration happened, till towards the end of the third week; from that time the pupils of his eyes began to contract; he took notice of several objects, and eat rather more food, which was seldomer thrown up. His water, when any could be saved, was of an amber colour, and let fall a white sediment. His fits were not altogether so violent, nor so frequent, and his head measured less in circumference.

I mentioned this case from time to time to my friend Dr Percival who suggested to me the advantages of mercurial frictions, along with the use of the calomel. As the infant was

stronger, and appearances more favourable, I ordered fifteen grains of the strong mercurial ointment to be rubbed in three times every day, and that he should take the calomel at night as usual. This answered beyond expectation, and his recovery was rapid. In about five or six days after the first rubbing with the ointment, the mucus was discharged from his nose, which from the commencement of his illness had been entirely dry. His urine was more in quantity, still letting fall a white sediment; he could hold his head in an erect posture, during the fifth week; and his fits, gradually declining, on the 20th October entirely ceased, except a slight return on the evening of the 24th.

Towards the end of October, he could walk with help, and now walks by himself; is lively; his complexion is clear; gains strength and flesh daily; eats moderately; the fontanelle almost closed; sleeps sound, and his head is much reduced in size, in so much that some of his night-caps, which were too small, and even those of his younger brother, slip on with ease. He continued the use of his medicines for some time, as he found no inconvenience from them,  
for

for the mercury never affected his mouth, salivary glands, or bowels, which have been in a proper state, and his urine without any white sediment. At present, he takes single grain calomel every second night, which I propose to continue for some time longer.

## IX.

*Histories of two Cases : The Discharge of a large calcareous Concretion, and the Extraction of the Bones of a Fœtus by the Rectum. By Dr Samuel Fitzgerald, Physician at Mullingar.*

A LADY of rank in this neighbourhood, whose name delicacy forbids to mention, had laboured for eighteen months under the most excruciating torture and pains in the hypogastric region, particularly towards the back and os sacrum. For the last three months of her illness, she was so reduced for want of food and sleep, that she could not leave her bed, except when taken up to the tepid baths, in which only she enjoyed any tolerable degree of ease. In short, life now had become a burden, and death desirable to her and all around her. In

this deplorable situation, upon the discharge of an emollient anodyne glyster, she fortunately with it passed from the rectum a large hard ball of an oval figure, exceeding in size an ordinary orange, and so solid that nothing less than the stroke of a hammer could break it. It was of a dark cineritious colour, and of a calcareous quality in substance, weighing eight ounces and three drams. A total liberation from pain immediately followed its expulsion, and, in a very short time the hectic and other alarming symptoms vanished, and the lady is now perfectly re-established in health.

The other case is that of Mary Dardis, a native of this town, who, on the first day of June, after the usual term of gestation, *viz.* nine months from her second marriage, was taken ill of labour-pains; but these being rather tedious, and cold, as the midwife termed it, I was sent for; and, upon examining the state of the uterus, I could not possibly find its orifice, though, at the same time, I clearly perceived a round hard bulk through the teguments which I concluded was the head. In this situation, I desired she might be properly supported and patiently

ently wait the increase of more efficacious pains, and then to apprise me of it. For three days I heard nothing from her, and then calling at her place of residence, I found her engaged at her ordinary business, quite well, but uneasy at not having been delivered. I told her the right time was not yet come ; that when it did, all would be well, and not to fret herself on that account.

On the 10th of February next ensuing, being nine months and ten days, her husband, at midnight, called upon me, to let me know she was in high labour. Curiosity, as well as humanity, induced me to visit her; and, to my great surprise, the first object that presented to the touch was the foot and leg of the skeleton hanging forth from the rectum. This, by merely handling it, readily separated at the articulation of the knee; and, as no entrance to the womb through the vagina was yet to be found, I was reduced to the painful necessity of extracting the entire skeleton, bone after bone, through the anus. This loathsome manœuvre continued for the best part of three successive days; for the intolerable stench, and difficult access, were so great, that I could not bear it longer than an hour at any one time. I suppose the obliquity of the  
womb's

womb's elevation was the cause of this very preposterous birth, that its orifice had reached that part of the rectum through which the heel of the skeleton must have gradually found its passage ; for she had uninterrupted pains in the lower part of her back during the last three months, which she called a dry cholic. By cleansing vulnerary injections, and a liberal use of the Peruvian bark, the woman is restored to health. Though this seems scarce credible, yet it is literally true, as may be attested by a surgeon I was obliged to call in, to assist now and then in the delivery.

## X.

*The History of a Case of Hydrocephalus successfully treated by Mercury. By Dr Thomas Aery, Physician, Whitehaven.*

**J**ANUARY 4. 1780, I was called to Mr —, aged nine years, of rather a pale complexion and relaxed habit. He had been seized, a week before, with an acute pain of the whole head; the teguments of it were sore to the touch; he complained of nausea, anorexia, erratic pains of the extremities and side; thirst in the afternoon; tongue

tongue clear; pulse rather frequent. I gave him a cathartic, an emetic, and one dose of the pulvis sudorificus of the Edinburgh Pharmacopœa; blisters behind the ears were kept open with the mild epispastic ointment of the Edinburgh Pharmacopœa; and, in the interval of the evacuations, the saline mixture, with volatile sal ammoniac impregnated with lemon-juice, and drops of antimonial wine and thebaic tincture; afterwards drops of dulcified spirit of nitre, which were followed by an infusion of bark with valerian, a solution of corrosive sublimate mercury, and volatile tincture of guaiac, without any apparent effect, although given in large doses, excepting that the anorexia left him after the emetic, which operated but little.

20th, Light painful to the eyes, the pupil of the eyes much dilated, strabismus, and cannot distinguish capital letters in print; double vision; speaks very unusually slow; stupor, and will not rise out of bed; looks as full as usual in the face, but the extremities are considerably emaciated; appetite good, or eats food greedily, and sleeps well; little thirst; abdomen rather tense and hard; stools and pulse regular.

27th,

27th, Symptoms much the same. Mr Hamilton, an ingenious surgeon and apothecary, who attended this patient with me, now asked me, "If I did not think the disease to be the "hydrocephalus internus?" I answered in the affirmative, and that I proposed to put him under a course of mercury, as recommended by Drs Dobson and Percival, and also as I had for many years found mercury useful when given as an aperient and deobstruent in dropsies.

February 1. he began with taking a grain of calomel every night at bed-time, and with having a scruple of strong mercurial ointment rubbed upon his legs, which were afterwards covered with a flannel; the regimen usual to raise a gentle salivation, was also directed.

10th, Pain of head increased.

11th, Vomiting came on last night, and continues, but soon stopped with taking the saline mixture with thebaic tincture; complained of his tongue being very sore; I found it with a little aphthous redness round the sides of it, but no spitting.

22d, Said he was better for the first time.

24th, Sat up, and could read small print, and continues well at this time.

From

From February 1. to March 8. he took calomel. gr. xlii. and used of ung. coerule. fort. unc. iii. & scrup. iv. without producing any salivation, or any apparent evacuation, excepting the night and day that he vomited a little. In Dr Dobson's and Percival's cases, the mercury salivated. It is, however, a well known fact, that, in the lues venerea, we are sometimes disappointed in raising a salivation, but not from thence in the cure of the disease, only a greater quantity of mercury is in general necessary, as directed by Dr Astruc. Why may not mercury sometimes cure this disease, without salivating, as well as it does the lues venerea? and may it not here have performed the cure, by opening the obstructed mouths of the absorbent vessels, and so rendering them capable again of absorbing the extravasated water?

## XI.

*Observations and Experiments on the Effects of different Anthelmintics applied to Earth-worms, communicated to Dr Duncan in a Letter from Dr Thomas Fowler, Physician at Stafford.*

WHEN I had the honour of being an ordinary member of the Royal Medical Society of Edinburgh, and it came to my turn to write papers for the Society, the following question was assigned me, at my own request, What vermifuges are the most eligible from their effects on earth-worms? In consequence of this, I made a great number of experiments on earth-worms, and made them the basis of a paper which was circulated, read, and debated upon, in due course, agreeable to the rules of the Society.

Since that time, from a consideration of the frequent occurrence of worms as a cause of disease, and the great difficulty we often find in our attempts to eradicate them, I have been led to hope, that, by a repetition of the experiments, in order to render the effects more accurate, I  
might

might suggest some practical hints to the Faculty by their publication. For this purpose, I have made a considerable additional number of experiments with most of the same vermifuges before employed, and have contracted the result of the whole into a concise tabular view, by which means their obvious effects and comparative merits will be much more readily examined and understood. Moreover, in order to bring this paper within the compass of an article not too large for admission into your useful Medical Commentaries, I have left out the greatest part of my former introduction, and have entirely omitted the medical remarks upon all the experiments, excepting two, leaving it to the Gentlemen of the Faculty to draw thier own conclusions from the facts.

I should have been glad to have made experiments on human worms, but that was impossible; for if a sufficient number could have been obtained alive, on being removed from their natural habitation in the human body, and exposed to the open air, the whole of them would almost immediately have died.

Earth-worms, it is true, are of a different species from the human or intestinal, as they are  
called

called by Linnæus; but that author includes both with propriety under the same genus; and if we examine them attentively, they seem to have properties enough in common for a set of analogical experiments. I should have been very glad to have made some trials with the mechanical vermifuges, such as the rough filings of steel and tin, &c. but found it was not easy to be done, for the worms almost immediately after these substances were applied to them, would lie still and not appear at all disturbed, unless they were purposely put in motion, and thereby made to feel the stimulus of the angular particles of these substances; hence no certain conclusions could possibly be drawn from effects so contingent. Moreover, calomel and æthiops mineral (especially the former, which is perhaps the most powerful vermifuge we are possessed of) being neither soluble nor readily suspended in any aqueous menstruum or vehicle, could not easily be tried. I own, however, that many more experiments might have been made similar to those I had already accomplished, but my other avocations did not render it convenient to proceed. I acknowledge also, that those which

I have made are not without errors, but I hope there are none that are material.

The use of the following table, I apprehend, will be so obvious to the reader, as to need very little explanation.

The first column contains the prescriptions of the several vermifuges.

The second exhibits the number of experiments made with each.

The third contains an account how the worms were affected, on being immerfed in the several fluids and compositions.

The fourth shews in what length of time the worms became motionless in the vermifuges of the more active kind; but in those of the less active kind, that circumstance was much more difficult to be ascertained, from the greater length of time requisite, and therefore it was omitted: As it was also in expressed oils, in which they could not exert their motions in proportion to the stimulating powers possessed by some of these oils, on account of their viscosity.

The fifth shews in what length of time the worms were found dead, taking the shortest and the longest period in the collective number of experiments to each article. It is almost su-

perfluous to add, that the letters D. H. and M. in the two laſt columns, are the initials of days, hours and minutes.

One half of the experiments were made with the conduit or ſoft fountain-water of Edinburgh, and the other half with freſh rain-water. The firſt claſs of experiments were made upon theſe waters, as the vehicles of moſt of the following articles, as exhibited in the beginning of the table. This was done, in order that we might make a proper allowance for the influence of water in killing earth-worms, independently of the medicinal qualities of the ſeveral vermifuges. The worms uſed in the experiments weighed from two ſcruples to fix; but thoſe were generally preferred, which weighed from three ſcruples to five. They were ſeldom uſed, till they had been purged one, two, or three weeks in mofs; for it was obſervable, that they would die much ſooner under any experiment, if uſed juſt taken from the ground, and conſequently full of earth. In order to know, with more certainty, when the worms were dead, (one being uſed to every experiment), they were, from time to time, taken out of their ſeveral vermifuges in open phials, laid upon a plate, and preſſed with  
the

the blunt end of a probe, till they ceased to move distinctly on being pressed. Some means of this sort was necessary, since almost all the reptile race of animals are so tenacious of life, that in many circumstances it is difficult to say, whether they are really dead or not.

# V E R M I F U G E S.

## W A T E R S.

- R. Aquæ fontanæ unc. iv.  
 R. Aquæ pluvialis unc. iv.  
 I. N E U T R A L S A L T S.  
 R. Sal. mar. dr. ii. aq. font. ferv. unc. ii. M. fiat solutio.  
 R. Sal. gemm. dr. ii. aquæ pluv. ferv. unc. ii. M. fiat solutio;  
 R. Nitri crudi dr. ii. Aquæ pluv. ferv. unc. ii. M. fiat solutio.  
 R. Salis cathart. Glaub. dr. ii. aquæ ferv. unc. ii. M. fiat solutio.  
 R. Aquæ marinæ unc. ii.

## II. A C I D S.

- R. Succî limonum recentis unc. i.  
 R. Aceti unc. ii.  
 R. Spiritus vitrioli fortis gutt. xii. aquæ fontanæ unc. ii. M.

## III. A L K A L I E S.

- R. Salis abinthii dr. ff. aquæ pluvialis fescunciam.  
 R. Salis tartari dr. ff. aquæ fontanæ fescunciam. M.  
 R. Salis fodæ dr. ff. aquæ pluvialis fescunciam. M.  
 R. Salis vol. falis ammon. dr. ff. aquæ pluv. fescunciam. M.  
 R. Lixiv. Caultic. Ph. Ed. gutt. xl. aquæ font. unc. i. M.  
 R. Spiritus cornu fervi gutt. xl. aquæ pluv. fescunciam. M.  
 R. Aquæ calcis unc. iii.

## IV. M E T A L L I C S A L T S.

- R. Merc. corrol. sublimat. gr. iv. aquæ pluv. unc. ii. M. fiat solut.  
 R. Salis martis scrup. ii. aquæ pluv. fescunciam. M. fiat solut.  
 R. Vitrioli albi scrup. ii. aquæ pluv. unc. ii. M. fiat solut.

## V. E S S E N T I A L O I L S.

- R. Ol. essent. e fol. Sabin. gutt. xx. aquæ pluv. unc. ii. facch. alb. fef-  
 quedrachmam. M. S. A.  
 R. Ol. essent. e fol. abinth. gutt. xx. aquæ pluv. unc. ii. facch. alb. fef-  
 quedrachmam. M. S. A.

Number of Experim.	Worms how affected.	When Motion- less.	When dead.
3.	Not at all disturbed.		2 D. 8 H. to 5 D.
7.	Ditto.		2 D. 1 H. to 4 D.
2.	Strongly convulsed.	2 M. to 3.	3 M. to 4.
2.	Convulsed.	Ditto.	Ditto.
2.	Ditto.	2 M.	About 4 M.
4.	Ditto.	3 M. to 5.	10 M. to 16.
2.	Somewhat convuls.	8 M. to 10.	12 M. to 16.
4.	Violently convuls.	3 M.	6 M. to 7.
4.	Ditto.	3 M. to 4.	9 M. to 10.
4.	Ditto.	4 M. to 6.	10 M. to 11.
2.	Strongly convulsed.	About 2 M.	About 4 M.
3.	Ditto.	4 M. to 6.	8 M. to 10.
2.	Convulsed.	8 M. to 9.	27 M. to 30.
2.	Strongly convulsed.	About 3 M.	29 M. to 34.
2.	Ditto.	3 M. to 4.	10 M. to 15.
3.	Convulsed.	3 M. to 4.	15 M. to 16.
4.	Strongly convulsed.	9 M. to 12.	25 M. to 30.
4.	Much convulsed.	4 M. to 8.	16 M. to 20.
5.	Much disturbed.	25 M. to 50.	1 H. to 2.
4.	Convulsed.	20 M. to 35.	2 H. 1-4th to 2 H. 3-4ths.
2.	Very much disturb.	9 M. to 15.	2 H. to 2 1-half.
2.	Somewhat convuls.	8 M. to 12.	1 H. 1-4th to 1 H. 3-4ths.

VI. EXPRESSED OILS.

R. Olei expressi sem. ricini unc. i.	
R. Olei expressi sem. Lini unc. ii.	
R. Olei olivæ unc. ii.	
VII. B I T T E R S.	
R. Succummit. tanacet. recent. fescunciam.	
R. Succummit. rutæ recent. unc. ii.	
R. Succummit. absinth. Rom. recent. unc. ii.	
R. Succummit. juglandis recent. fescunciam.	
R. Aloes focot. dr. ff. aq. pl. fescunciam, simul terrendo fiat sol.	
R. Fol. jugl. rec. fescunciam, aq. pl. unc. vi. ad. colat. unc. iii.	
R. Flor. lupuli exsic. dr. ii. aq. pluv. unc. vi. coq. ad colat. unc. iii.	
R. Pulv. sem. fanton. scrup. ii. aq. pl. unc. vi. coq. ad colat. unc. iii.	
R. Rad. gent. exsic. incif. scr. iv. aq. pl. unc. vi. coq. ad colat. unc. iii.	
R. Atheris vitrioli dr. ff. aquæ font. unc. i. M. & obteretur phiala.	
R. Spiritus vini Gallici (Anglicè French Brandy) fescunciam.	
R. Spiritus frument. (Scoticè Whisky) fescunciam.	
R. Vini rubri fescunciam.	
R. Olei camphorati Ph. Ed. unc. ii.	
R. Pulv. cort. Per. dr. i. aq. pluv. unc. iv. coq. ad colaturæ unc. ii. camphoræ (in spiritu vini ten. gutt. xx. & mel. despum. dr. ff. fol.) scrup. i. M.	
R. Fellis bovini recentis unc. ii.	
R. Folior. nicot. fescuedrach. aq. font. unc. vi. coq. ad colat unc. iii.	
R. Pulv. rad. jalap. dr. i. aq. pluv. unc. vi. coq. ad colat. unc. iii.	
R. Gum. asæ foetidæ dr. i. aq. font. unc. ii. simul terendo, M.	
R. Fol. spigel. Maryland. dr. i. aq. pluv. unc. vii. coq. ad colat. unc. ii.	
R. Pulv. cort. Per. dr. i. aq. pluv. unc. iv. coq. ad colat. unc. ii.	
R. Pulv. rad. rhei dr. i. aq. pluv. unc. vi. coq. ad colat. unc. iii.	
R. Fol. fenæ dr. ii. aq. pluv. unc. iv. coq. ad colat. unc. ii.	

4.	3 H. to 5.
4.	10 H. to 12.
4.	24 H. to 34.
4.	50 M. to 70.
4.	55 M. to 65.
4.	60 M. to 70.
4.	54 M. to 64.
4.	2 H. 3-4ths to 3 3-4ths
4.	4 H. to 5 1-half.
4.	2 H. 1-half to 4 1-half.
5.	5 H. to 8.
2.	10 H. to 12.
4.	5 M. to 7.
3.	14 M. to 16.
2.	14 M. to 17.
5.	15 M. to 20.
4.	15 M. to 20.
4.	19 M. to 30.
3.	20 M. to 35.
4.	41 M. to 60.
2.	2 H. 1-4th to 2 H. 1-half.
4.	3 H. to 5 H.
4.	2 H. 3-4ths to 5 H. 1-half.
4.	4 H. 1-half to 7 H.
2.	6 H. to 7 H.
4.	8 H. 1-half to 1
4.	Very much disturb.
4.	Ditto.
4.	Ditto.
4.	Ditto.
4.	Much disturbed.
4.	Somewhat disturb.
4.	Much disturbed.
5.	Ditto.
2.	Somewhat disturb.
4.	Convulsed.
3.	Ditto.
2.	Ditto.
5.	Ditto.
4.	3 M. to 4.
4.	Ditto.
4.	4 M. to 5.
4.	5 M. to 6.
4.	4 M. to 8.
4.	Very much disturb.
3.	Much disturbed.
4.	Very much disturb.
2.	Somewhat disturb.
4.	Much disturbed.
4.	Somewhat disturb.
4.	Ditto.
2.	Ditto.
4.	Ditto.

From observing the efficacy of common salt in destroying worms, beyond that of Glauber's, in the preceding experiments, I have several times directed the former to be exhibited in glysters, in some strongly marked cases of ascarides, and it has generally in a few minutes, a quarter, or half an hour, brought away a considerable number of those animals, with relief. And from remarking the superior effects of the oleum camphoratum, to those of the simple expressed oils, in the same experiments, I was led to prescribe the following glyster in adults, in the same sort of cases, and have found it a more efficacious remedy against the violent itching and other painful symptoms of the anus, than any I had ever yet met with. It generally gives some immediate ease; stays all night, without any inconvenience; comes away in the morning, sometimes with a natural stool, sometimes without; seldom bring away any live animals, but sometimes dead ones, or a viscid and slimy matter. I am inclined to think the glysters might be exhibited in double quantity, without inconvenience, if found necessary; but I have not yet tried it.

R.

R̄. Camphoræ dr. i. olei olivarum unc. ii. M. ut fiat solutio pro enemate, hora decubitus omni nocte ad tertiam vicem injiciendo. Deinde repetatur enema alternis noctibus ad quartam vicem, si opus fuerit.

## XII.

*Observations on the Plague, Quarantines, &c.  
in a letter from Dr Matthew Guthrie, Phy-  
sician at St Petersburg, to Dr Duncan.*

SOME time ago, I did myself the pleasure to send you a small bag of the rhododendron chrysanthum, from the mountains of Siberia, to make trial of in your Dispensary, in gouty and rheumatic cases, which I see has been received, by your inserting an extract of my letter in the Medical Commentaries. I should be much pleased to see the result of such experiments, either in the same useful publication, or by private communication, providing your many important occupations should admit of a spare hour.

In the mean time, I shall take the liberty to transmit you some remarks upon quarantines,

and the plague, which I have had an opportunity of collecting at the Russian army in particular, and in this country in general, which has been so severely visited with this scourge of mankind some years ago. I had long entertained an opinion, that the term of quarantine, as established in several countries of Europe, was unnecessarily long, and that from this circumstance it defeated, in a manner, its own end ; but I was much confirmed in my way of thinking, by finding men of the greatest practice and experience, whom I consulted on the subject at the army in 1772, (where I had been carried by professional duty), of the same opinion. However, even thus emboldened to speak, I do not believe I should have had courage to make an attack on laws that have had the sanction of ages, if I had not the authority of the great Cullen on my side, who has expressed similar sentiments, in his new publication, *First Lines of the Practice of Physic* ; and I shall therefore cover my remarks with the passage alluded to, when treating of the plague. He expresses himself thus :

“ With respect to quarantines, we are persuaded, that the quarantine of persons may  
“ safely

“safely be much less than forty days; and if  
 “this was allowed, the execution of them would  
 “be more exact and certain, and the tempta-  
 “tion to break them would be in a great mea-  
 “sure avoided.”

Chance threw in my way an excellent opportunity of examining into the merits of this opinion, by consulting the Physicians and Surgeons of the Russian army, lying in the conquered Turkish provinces of Moldavia and Walachia, where the plague ever obtained more or less during the whole war, and at the beginning raged with destructive violence; and on addressing myself to Baron Ash, Physician-general, I had an answer that met my ideas on the subject.

I suggested to him a doubt of the possibility, that the very active contagion of the plague could remain so long latent in the body as the quarantine of persons seemed to imply, and that it appeared to me to be founded on an imperfect knowledge of the disease, drawn from a period of ignorance, or of general consternation and terror.

His answer was, that he did not think it possible that the contagious matter of this violent  
 disease

disease could lurk longer in the body than fourteen days, without declaring itself on or before that period ; but that, from his own observation and experience, he could not take it upon him to say that it could be concealed so long. Such were likewise the answers I received from the other medical gentlemen whom I consulted upon the subject. Some gave a little more latitude, and some less, (as it can only be a matter of opinion), but none exceeded fourteen days, and few came up to it.

The difficulty of ascertaining the exact time when the infection is received, and consequently the interval that takes place before the attack of the pestilential fever, must appear upon the face of the case, except experiments were to be made on purpose, which is scarcely to be expected. However, the intrepidity of a single man has thrown some light upon the matter.

This was Mathias Degio, one of the surgeons of the hospital at Bucharest, a building appropriated to the cure of the plague in the Russian army. He, perceiving the gentlemen of his profession, condemned, in a manner, to death, if punctual in their duty, had the resolution to inoculate himself for the plague, in the full confidence

fidence of its efficacy, and ever afterwards found himself invulnerable, whilst his companions around him were falling victims to its fury.

He produced the disease, by inserting with the point of a lancet, under the epidermis of his arm, matter from a pestiferous abscess, and followed the cold regimen observed in the small pox, as he had imitated its mode of inoculation. On the fourth day of the puncture the fever declared itself, and he being perfectly devoid of fear, got through the disease, without feeling more inconveniency than if it had really been that which he imitated. He drank freely of cold water, with vinegar, or a little wine, and kept generally out of doors. This beverage was the only remedy that had the appearance of medicine, which he had recourse to ; and he relied for the rest on air and Providence. Now this case seems to point out the fourth day after insertion, as the period that the disease shews itself ; however it is a pity, that this fact rests upon one experiment. I have made also particular enquiries concerning the plague and quarantines amongst my professional brethren, that survived the destruction of the faculty at Moscow ; and I am inclined to think, from the whole of  
their

their information, that this dangerous disease finds entrance into countries either by means of goods or by men purchasing the connivance of quarantine guards, to pass at an early period, without having undergone sufficient purification, with the very garb that they wore in the infected kingdom, and probably with other property concealed in their pockets, and about their persons; for here I suppose the real danger lies, as inanimate matter may conceal contagion for a length of time, without any criterion to judge of its presence; and I am told this accident has sometimes happened in this country, from the natural impatience of men on the prospect of so long a restraint, hazarding every thing, and lavishing their money to elude it. Now, it is probable that instead of the distant period of forty days, (distant indeed to a man returning to his friends and country, after a long journey and absence), if the duration of purification was reduced to three weeks, and made more effectual by bathing and well cleaning the body with soap and water, so as to remove every adhering particle, and afterwards dressing them in clean clothes, that never had run the risk of infection, instead of the inadequate and ineffectual ceremony

mony of smoaking. Whilst all sorts of personal property should remain to be aired and purified with the other goods, except money, which might undergo the operation of scrubbing with its possessor, before being allowed to circulate through the hands of the public. I say, that with these precautions, I am convinced in my own mind, that the quarantine of persons might be much shortened, without danger to the state ; nay, that the danger would be much lessened, by such alteration in the law, from the temptation to break it being in a great measure removed ; but that government, at the same time, cannot be too careful in airing and purifying goods, and even personal property ; although I should think that this also might be effected in less time, as it probably depends more upon the means employed, and the frequently presenting of different surfaces to the air, than in the duration of such labour. I suspect that religious superstition has had some share in pointing out exactly forty days.

I shall now give you what particulars I learned with regard to the plague from the medical gentlemen at the Russian army, and from other practitioners well versed in the disease.

*Substance*

*Substance of Notes, taken at the RUSSIAN ARMY.**Symptoms of the Plague.*

The Physician-general informed me, that on the attack of the disease, the patient was seized with a dull pain in the head, resembling the effect of phlogiston from Charcoal \*, accompanied with a shivering and universal weakness, a bitter taste in the mouth, nausea and a heavy inflamed eye. These symptoms were succeeded by a vomiting, and a bubo or bubos made their appearance in the inguinal or subaxillary, and sometimes parotid glands, but always lower down than where the venereal bubos appear. After those glandular swellings, there sometimes followed livid-coloured carbuncles on different parts of the body, even on the bubos themselves; but it is remarked, that if the hands or feet were the seat of them, the patient seldom or never recovered. Dr Ash also observed them to be

\* I have endeavoured to describe the effects of phlogiston from charcoal on the human body, in a letter to Dr Priestly, an extract of which is published in the 69th volume, I believe, of the Transactions of the Royal Society; and have adjoined the mode of cure, as practised in Russia, where the accident is very common.

be attended with the greatest danger, when seated on the dorsal spine.

If medicine did not relieve the patient soon after this period, a delirium came on, attended with a small quick pulse, and convulsions put an end to the patient's life. Such were the principal symptoms of the plague, in the hot climate where the army lay.

The mode of cure which they found the most effectual, was beginning with a vomit on the appearance of the first symptoms, and working it off with acid drinks. If the nausea and bitter taste in the mouth was not removed by the first, they gave a second, and sometimes a third and fourth ; nay, if the symptoms were very urgent, they gave two or three in the space of twelve hours, as there is no time to be lost in this disease ; for they did not find this species of evacuation subject to the same objections as brisk purges, which a man in the plague is unable to support ; nay, they are even dangerous, although he bears brisk vomits, and a repetition of them, when the nature of the case require it. The stomach thus cleared, they gave the following powder every morning : *Rx. Pulv. rhei elect. flor, sulph. aa scrup. i. ipecac. gr. iii. M. f. pulv.;*

pulv. ; and every hour, *Rx.* Camphoræ gr. ii. nitr. pur. gr. v. *M. f.* pulv. ; and if costive, a laxative glyster was administered every evening, composed of decoct. flor. chamomel. cum acet. vini, with or without soap, according to circumstances.

The head, temples and bubos were frequently bathed with warm vinegar, and the last urged to suppuration, with emollient cataplasms ; but in case they were found to baffle all attempts to bring them forward, they were then scarified or extirpated, and the patient ordered to drink plentiful of aq. calcis. Bark was given after evacuation, joined to the flor. sulph. in the proportion of one ounce of the first to one dram of the second, divided into sixteen powders, and taken in twenty-four hours. When delirium came on, blisters were applied to the legs and arms, and camphor given largely. Vegetables and mineral acids were indiscriminately used ; but they found the vegetable to remain upon the stomach sometimes, when the mineral was thrown up ; and of the latter, they preferred the vitriolic. They gave acidulated drinks in quantity through the whole disease, and

and the food consisted of acidulated water-gruel, and fruit when they could procure any.

The air of the room was kept charged as much as possible with acetous vapours; and the Doctor concluded this outline of their mode of cure, by remarking, that while the bitter taste continued, there was little hopes of the disease abating.

The other medical gentlemen agreed so closely in their accounts with their chief, that I have thrown the whole into one narration.

Since my return to Petersburg, I have got some information from gentlemen, who served all the last war in the plague hospitals, but whom I did not meet with at the head quarters (Jassy) during my residence there.

One of those gentlemen, Mr George Smyth, surgeon-major of the Imperial Land cadet-corps of Nobles, to which I am a Physician, is a rare instance of a man surviving two different attacks of the plague, with all its characteristic symptoms, such as buboes, carbuncles, &c. and for this reason, his account must be interesting. The method of cure that twice saved Mr Smyth's life, and what he used to his patients, during near five years that he was employed in treat-

ing this disease, was beginning with a strong vomit, composed of pulv. ipecac. dr. ss. tart. emetic. gr. i. tart. vitriolat. scrup. i. M. f. pulv. This was taken for a dose, and repeated once or twice, as the case required, during the first two days, and, in the intervals, was given an opening ptisan of fruct. tamarindor. and manna, to prevent constipation. When these evacuations had been made for a couple of days, or sooner, if the symptoms were urgent, he gave the bark in quantity, joined to the flower of sulphur, without losing time, (as he expressed it), with camphor and nitre. The rest of his practice agreed so exactly with what is given above, that I shall only add some remarks he made upon the disease.

He observed, that the carbuncles are a more advanced symptom of the plague than the buboes, and a sign of the pestiferous virus being in a more active and malignant state; and as for the petechiæ that sometimes appear towards the end of the disease, they are regarded as a mark of the highest possible degree of malignity, and as heralds of approaching death. However, this is a symptom that we are accustomed to see in putrid diseases of inferior note, where I believe

lieve buboes and carbuncles would alarm a practitioner much more. He also observed with Dr Ash, and the other gentlemen at the army, that the pestiferous bubo is particularly marked by its situation from those that appear in other diseases, and is perhaps the surest method of distinguishing the plague in some cases, from the putrid malignant fever in its worst aspect in warm climates ; although it must be allowed, that the plague sometimes appears without this characteristic mark ; and then the Physician can only judge from the violence and rapid progress of the symptoms. He also said, he had seen men in apparent good health, instantaneously drop down, as if shot with a musket-ball, by the sudden action of the pestiferous miasma, and upon duty again in twenty-four hours, perfectly recovered by the operation of a strong vomit : This looks as if the contagious matter existed in a very loose state in the first passages, at the beginning of the disease.

The Surgeon-major of the Imperial Convent of Noble Ladies, is also a veteran army-surgeon, and made a few additional remarks to me upon the disease. He said, that the carbuncles which he had seen in that division of the army where

he served, were of two sizes; one as big as a pigeon's egg, and the other something smaller; they likewise had the form of an egg, cut longitudinally, with the flat surface applied to the body. They are attended with more or less danger, according to their colour, red, or livid; the last is more dangerous than the first; but neither the one nor the other is attended with so much, if they suppurate, as when dry. That there is a line most distinctly drawn between the plague and malignant fever, by the impetuosity and violence of the symptoms, when even no buboes appear; for he says, the patient will be in perfect health in the evening, and in the morning you find the nervous system, in such a state of debility and disorder, that with difficulty you can get answers to the necessary medical questions.

His own practice, and that of the hospital which he attended, consisted in giving a cold turbid infusion of the bark in vinegar in large doses of two drams (substance) every two hours, as soon as the first passages were cleared; and he seldom gave purges, except when the vomit did not procure a stool, which was ipecacuanha in substance.

You

You will observe, that those gentlemen lay a stress upon distinguishing the plague from the worst sort of malignant fever in hot countries ; and it is not without reason, as bad consequences have attended the confounding them on the breaking out of the plague. I am credibly informed, that the great havock made in Moscow was principally owing to this circumstance ; for it obtained some time before being discovered by gentlemen unacquainted with the disease, and before they would acknowledged its existence, although some veteran army practitioners recognized its appearance, under one of its forms, and endeavoured to alarm their brethren, but in vain for a time.

As an appendix to these few outlines of the Russian plague, I shall give some passages of a speech that I heard Baron Ash deliver last year, on being elected a member of our Imperial Academy of Sciences, as it falls into my subject. This harangue was on the advantages that science in general, and medicine in particular, have acquired from war.

He said, that at the Russian army last war, the medical gentlemen had, by long observation, and repeated experiment, ascertained, that

the plague does not depend upon any particular constitution of the air, but is communicated only by contact; and they had repeatedly succeeded in suppressing it in different divisions of the army, by the immediate separation of the infected with their attendants, and burning every thing belonging to them, or that they had touched.

That they found the greatest advantage accrue to the army, from keeping the soldiers in ignorance of its existence, till suppressed; for, by this means, they preserved their peace of mind, and health of body; and they found an exact military discipline, the best preservative against the disease. For the cure of those infected, they found the cold regimen, a free circulation of air, vegetable and mineral acids, ipecacuanha, rhubarb and bark, to be the most proper remedies. That to purify the air in hospitals appropriated for their reception, gunpowder was found most efficacious, probably from the commotion given to the air in explosion, over and above its action in common with other fumes.

To resist infection, courage and fortitude of mind is necessary, as consternation and terror  
seem

seem to prepare the body for the reception of the disease.

In heated rooms, the disease is ungovernable ; it is only in free air that it is to be treated.

The Baron then said a great deal in favour of inoculation of the plague, in cases of danger from infection, and supported his opinion with the case of Mathias Degio given above ; and the analogy that has been observed between the plague, small-pox, and the contagious disease that so often attacks horned cattle, a species of animals so necessary to agriculture, and the general use of man ; he said, that a number of enlightened men had endeavoured to find a remedy for these different evils, and that they had as yet found nothing to answer equal to inoculation ; and mentioned a set of fortunate experiments made last year by Mr Schumacher, in different parts of the dutchy of Mecklenburg, to inoculate horned cattle for the contagious disease so fatal to them, which are well worth the attention of the public, and to be found in a treatise, written in the German language, and published at Berlin 1779, in 8vo, entitled, “ A  
“ Method of stopping the Danger, directly on

“ the Appearance of the Disease amongst horn-  
“ ed Cattle, illustrated by Experiments and  
“ Facts.”

And some time before, the late learned Professor Erxleben of Gottingen had also published another upon this subject, in German, at Gottingen, entitled, “ The Art of curing the Diseases of Cattle.” Gottingen 1771. 8vo.

Such, good Sir, is the information I have been able to obtain in this country, of a disease that Providence has been pleased to keep at a distance from ours, for a number of years ; and that very reason is the only one I shall offer for sending it, as Physicians, like other natural philosophers, require a number of well attested facts, to form opinions upon those your good fortune has denied you at home on this subject ; and consequently I presume they must be acceptable from abroad. And if my Russian news can give you any satisfaction, I shall take a pleasure in communicating them, when opportunity offers, in return for the real advantages I reap from the perusal of your useful Commentaries, which are particularly so to us, who live abroad, and are, at the same time, anxious to know  
what

what passes at home in the line of your profession.

*P. S.* There is a curious fact, which I recollect in the Baron's speech; and as it possibly may not be generally known in Great Britain, I shall mention here: "That the Surgeons of the Prussian army last war, have discovered applications with cold water to be the most effectual remedy in violent concussions of the brain." This application, I have repeatedly used with success.

This speech will be printed, I suppose, in the acts of the Academy, according to custom, as the harangue of a new member.

S E C T.

## S E C T. III.

*Medical News.*

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**D**R FITZPATRICK of Dublin, in a letter to Dr Duncan, gives the following remarkable instance of convulsive affections in two young ladies, being induced from a very uncommon cause :

“ I was called to a Mrs Bolger, in Shipstreet, in the year 1779, who was violently attacked with a nervous cholic. Its violence was so great as to equal, by her own description, the pains of labour, but of much longer duration, being completely remittent ; for she was scarce ever free from pain for two days ; but at times, the paroxysms were so severe, as to render it difficult to keep her in bed.

Having

Having occasion to visit two young ladies of the name of Noy, about two hundred yards from Mr Bolger's house, who were then highly feverish, and in the eruptive stage of the measles; immediately on entering the chamber, I attempted to feel one of the young ladies pulse, when she screamed out, and said she got a violent pain, on which I let her hand loose, and went to the other side of the bed, (imagining she was joking), to feel the other ladies pulse; and by the time I was on the other side, and feeling the sister's pulse, the first lady was completely convulsed, and the second cried out in the same manner. Their limbs were drawn up, and their arms distorted, hands clinched, &c. But the second ladies attack was very trifling, when compared to that of the lady's whose pulse I first felt; for the second lady rather joked on the matter, after four or five minutes; whereas the first was so ill, and her limbs so convulsed for near an hour, as to render it necessary to hold them, and to administer assafoetida, valerian, and some thebaic tincture, before the parts were quieted; from which time, there never was any similar attack, nor did it ever happen before.

The

The following conjecture may perhaps afford some explanation of this singular affection.

I suppose, that a redundance of electrical fluid, or animal spirit, was irregularly circulating in Mrs Bolger, and that I became the conductor of that fluid, being, as it were, insulated on dry or parched flags, which continue all the way from Mrs Bolger's to Miss Noys; and that so soon as I arrived there, and had applied my finger to the lady's wrist, she was immediately affected; but that on going to the other side of the bed, the matter was likewise conveyed, but not so strong, as it was in some measure exhausted in the touch of the first lady. I have heard that the application of live pigeons to the navel of children labouring under convulsive complaints of the bowels, has relieved them, and that the pigeons have instantly become convulsed; but it is necessary to remove the feathers from the part of the pigeon that is to be applied: I suppose because feathers are non-conductors. If this be a fact, may we not suppose, that the redundant electric fluid, or animal spirit, is conveyed to the pigeon, and so causes the convulsed motion in him, whilst the  
infant

infant is freed from the disorder? And may not this be an useful hint to Physicians, in respect to cautioning them against what I was guilty of? Or might not the eruptive stage of the measles dispose the Miss Noys to be affected, as we sometimes observe a similar symptom in the eruption of the small-pox? Or might not the general irritability, heightened by the fever, dispose them to be attacked?"

\* \* \* \*

Dr Pearson, Physician at Doncaster, in a letter to Dr Duncan, gives the following account of the result of a number of experiments which he has made on the air contained in the Buxton waters. Although we have reason to hope that Dr Pearson may soon publish the experiments themselves, yet as his sentiments are very different from the opinions which have hitherto been entertained on that subject, the following short view may in the mean time be of some use, both in gratifying curiosity, and in prompting others to exert their industry on the same subject.

“ From the spaces between the pavement of the floor of the bath at Buxton, through which the water springs into the bath, a vapour or air is  
seen

seen pretty frequently to arise in bubbles of a larger or smaller size, and in a larger or smaller number, that pass immediately through the body of water to the surface, and there burst and escape.

These bubbles of air may be collected in great quantities, by placing inverted bottles and funnels full of water, and immersed in the bath, over the parts of the floor of the bath where they are apt to arise.

The air so collected has the following amongst other properties :

1. If to two measures of this air be added one measure of nitrous air, there will be no colour, turbid appearance, or heat produced by such mixture ; nor any diminution take place immediately, or by standing together.

2. It is fatal to animals the instant they breathe in it.

3. It extinguishes flame immediately.

4. It will not combine with water or with caustic ley, although the combination be assisted by heat and agitation.

5. It does not disturb the transparency of lime-water.

6. Vegetables

6. Vegetables *live* in greater health and vigour, and *grow* more luxuriantly, than in common respirable air, either in the open air, or under similar circumstances of confinement, &c.

7. It has no power of diminishing or removing the foetor of putrid animal muscles.

8. After being transfused through water, or lime-water, or caustic ley, thirty or forty times, its quantity is not diminished, nor its properties changed.

I should have observed, that the water, when fresh drawn from the well or bath, exhibits small beads or bubbles, that adhere to the sides of the glasses, and which escape or disappear by standing in the ordinary heat of the air. These beads are the above air. This air has been hitherto affirmed, in the most positive manner, to be fixed air.

Air is also separated from Buxton water by boiling.

Air so separated,

1. Does not combine with water or caustic ley.

2. Does not render lime-water turbid.

3. Two measures of this air added to one measure of nitrous air, always produces an orange-

orange-colour, turbid appearance, and heat for a few seconds, and a diminution of quantity. Sometimes the diminution is, after a few days standing, two measures and one ninth; at others, two measures and six or seven ninths.

4. Animals always live a much shorter time in this air than in common air, and sometimes are killed by it in a few minutes.

The water that affords this air by boiling, and which has been boiled some time after it ceases to yield this air, precipitates lime from lime-water as copiously as before, and requires as large a proportion of lime-water to separate the fixed air in the water as before boiling.

Matlock water, another warm mineral water in Derbyshire, contains about two ounce-measures of air, of greater purity than common air, in eight wine-quarts of water, and seven or eight ounce-measures of fixed air in the same quantity of water. The first is separated by boiling the water; the latter, by saturating the fixed air with lime-water, and afterwards decomposing the sediment by acids."

\* \* \* \*

Dr Bisset, Physician at Knayton, in a letter to Dr Duncan, gives the following account of several

veral remarkable particulars respecting an old woman in that neighbourhood.

“ On the 24th of August 1781, I called at the poor-house in Borrowby, a village situated on the declivity of a hill in this neighbourhood, to see Mary Wood, a poor woman, who is ninety-eight years and five months old. After taking the outlines of her face, and a half length, I asked her several questions, her answers to which afforded the following information. Her mother, who lived at Kirby Steven, in Westmoreland, attained the age of 112 years; and Mary Wood expects to live precisely to the same age. She does not remember her father, who died young. Mary has been affected with a cough as far back as she can remember; but she thinks it began in the fifteenth year of her age. About the same time, or in some time after the onset of the chronic habitual cough, her mistress, who chewed a little tobacco, advised Mary to adopt the same remedy for her cough, which, I suppose, was moist, or attended with an expectoration of some phlegm, as it is now. She has chewed tobacco ever since, and has a small chew always in her mouth, except when she eats or sleeps. Though an immoderate or frequent

use of tobacco, either by chewing or smoking, especially when it is attended with a copious spitting of saliva, generally palls the appetite, and occasions indigested food to descend into the small intestines before it is sufficiently digested, and by consequence debilitates the body, and in process of time gives rise to many bad effects; yet its effects with Mary Wood are precisely the reverse: For, if from poverty she happens to be deprived of tobacco during the space of two or three days, she becomes low-spirited, dejected, inappetent, and feeble, and is either unable or unwilling to get up; and she would probably soon die, were she to be totally deprived of it. But on being enabled, through the bounty of some curious visitor, to resume the chewing of her beloved tobacco, her fibres are again instantly braced up, her appetite, which is generally very good, returns, and her health is completely re-established. Indeed, as she is forced to be very frugal of her tobacco, she takes but a small chew into her mouth at a time; and it is probable that tobacco, on being used sparingly in this manner, might prove serviceable in some cases, particularly to persons that are naturally strong, but affected with a moist asthma. I was  
informed

informed by an old man, who had for many years been asthmatic, that he had taken various medicines for the disorder; but that the frequent chewing of a little tobacco, and swallowing a little of the spittle sometimes, was the only remedy from which he reaped any benefit; and that he was accustomed formerly, on being greatly oppressed with the asthma, to swallow as much of the spittle in a morning, fasting, as sufficed to excite vomiting, which always afforded the most immediate relief. Mary Wood is not liable to spit saliva in chewing tobacco.

She was twice married, and had five children, who all died young. Half a year ago she got twelve molar teeth, mostly in the lower jaw, eight of which only are now remaining; and as they are all somewhat loose, it is doubtful whether they originate from sockets, or only from the gum or periosteum. The gums of some old people become callous, so as to enable them to eat hard biscuit; and it is well known, that the periosteum is apt, in particular places, to ossify. I felt, with my finger, two small sharp teeth in the anterior part of the gum of the upper jaw, that cut within a week past. She sits up during the greater part of the day, and eats with a good

appetite, whether up or in bed, such food as other poor people in the poor-house are served with : She loves butchers meat, and delights in the fattest pieces ; but she lives mostly on milk and bread, and oat-meal and milk ; she drinks butter-milk as often as she can procure it, and her common drink is groundivy-tea. She has formerly been affected with a wandering rheumatism in a small degree ; and would certainly have been affected in a higher degree with it, or with a more grievous disease, if she had been exempt from an habitual cough, with spitting of phlegm. About twenty years ago, she lost the sight of her left eye, from a violent inflammation of it, which was attended with a vehement headach, being an ophthalmia of the whole ball of the eye, which is now sunk. She imagines it was occasioned by a large hailstone which hit the eye. She now sees but imperfectly with the right-eye ; but her hearing is tolerably good. She lies much in bed ; but her sleeps are neither long nor very sound, as they are often interrupted by fits of coughing, which always terminate by the expectoration of some phlegm. Indeed long sleeps would have disagreeable effects, by suffering phlegm to accumulate.

At

At three o'clock in the afternoon, when I saw her, she seemed cheerful, was healthy, breathed with perfect ease, and walked with great facility with the aid of a stick, her loins and head being pretty erect; but the dorsal vertebræ are somewhat prominent outward, but equally, in the form of an arch, no one vertebra being more prominent than another; but this curvature is not of an old date, as she was formerly straight; and she has been rather tall for a woman, and strong in proportion to her height.

She is affected in some degree with dizziness, a complaint most incident to old people; and though her breathing is perfectly free and easy, yet she cannot lie with her head low, but is under a necessity of having it propped up, doubtless that she may expectorate with more facility when attacked by a fit of coughing. Her pulse is large, somewhat hard, and quick, and the strokes are strong, free, and equal. When I first felt her pulse, it beat near a hundred strokes in a minute; but as I thought she might be fluttered a little by my presence, I called again in half an hour, and after sitting down by her for some little time on a bench at the door,

and asking some farther questions, when she appeared calm and composed, I counted her pulse again ; it then beat eighty times in a minute ; and this I take to be the common standard of her pulse. Her thirst has in general been greater than usual ; owing, I suppose, partly to the constant chewing of tobacco, and partly to the quickness of her pulse ; but her tongue is moist and well-coloured, as it is generally in catarrhal affections with spitting. She is so temperate in her body, notwithstanding the uncommon quickness of her pulse, that she never requires any laxative medicine. The tobacco is probably conducive towards promoting this good effect. As her face is rather plump, it is not greatly wrinkled, her forehead excepted. On the whole, may it not be inferred, that Mary Wood has been in some degree phthical from the fifteenth year of her age, that is, during the space of eighty-three years ? I make no doubt but she has an hereditary latent scrophulous taint, which has been repressed by strong fibres, joined with temperance ; and it is probable that one or more of her children, had they lived to a more advanced age, would have  
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been affected with a scrophula, or died consumptive.”

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A botanical society at Litchfield, have undertaken to publish a literal translation of the *Genera and Species Plantarum* of Linnæus. Our readers will be able to form some idea of this Work, from the following preface of the translators.

“ The future improvements in agriculture, in medicine, and in many inferior arts, as of dyeing, tanning, varnishing, with many of the more important manufactures, as of paper, linen, cordage, must principally arise from the knowledge of *botany*. For how can we ascertain the more recondite properties of bodies, without first being enabled to distinguish them from each other? From the want of this science, almost all the medicines, and many of the arts of the ancients, have been lost to their descendants.

The labours of Linnæus are generally acknowledged to have best supplied this great source of future improvement, and yet his works have not hitherto properly appeared in the English language. Mr Lee indeed, in his introduction to botany, has well translated and explained many

parts of the *Philosophia Botanica*; Dr Berkenhout has given a lexicon of terms extracted from the same work; and Mr Milne has disposed a great part of it, with other botanical knowledge, into the form of a dictionary. All these labours have their merit; but why should not the works themselves be translated into our language? The concise and beautiful arrangement, for which they are so remarkable, is lost in these diffuse explanations of them.

Dr Withering has given a *Flora Anglica* under the title of *Botanical Arrangements*, and in this has translated parts of the *Genera and Species Plantarum* of Linnæus; but has entirely omitted the sexual distinctions, which are essential to the philosophy of the system; and has introduced a number of English generic names, which either bear no analogy to those of Linnæus, or are derived from such as he has rejected, or has applied to other genera; and has thus rendered many parts of his work unintelligible to the Latin botanist, equally difficult to the English scholar, and loaded the science with an addition of new words.

We propose to give a literal and accurate translation of the *Genera and Species Plantarum*

rum of Linnæus, which unfold and describe the whole of his ingenious and elaborate system of vegetation. The terms which he invented, or appropriated to those parts of vegetables, which he either first discovered, or on which his system is erected, are retained in the translation with English terminations. As new ideas require new words to represent them, and must therefore be explained to the young botanist, it is of no consequence from what language they are derived. Those therefore already in use are preferred to such as might be found in our own language, though similar in their primitive signification; as such words would be liable to present to the mind their vulgar meaning, which is not sufficiently precise for the purposes of science. Thus, *calyx* is used by Linnæus for the green cup beneath some flowers, for the sheath from which others burst longitudinally, for the leaves beneath the umbels of others, for the husks of grasses, the catkins of willow, nettle, &c. the veil over the flowers of mosses, and the skin beneath the heads of mushrooms. All this must be explained, whether it is represented by the word *calyx*, or by the word *impalement*; which latter, though used by some of the writers

writers above mentioned, is as difficult to the English scholar, as the word *calyx*; is not understood by those who are already acquainted with the language of Linnæus; and does not assist the young botanist in his study of the original.

So the word *legumen* means a pod, in which all the peas or seeds are attached to the upper edge or future; *siliqua*, a pod in which they are alternately attached to the upper and under one. If the former should be termed *swad*, and the latter *pod*, they must still be defined; and thus the meaning of them would be as difficult to acquire by the English reader, as that of the words *legumen* and *siliqua*; and would be so unintelligible to the Latin botanist, that they could not converse together.

Hence we have retained the words *calyx* for flower-cup, *corol* for blossom, *stamen* for chive, *pistil* for pointal, *pericarp* for fruit-vessel, and some other technical words; such as would necessarily be used in an English conversation by botanists acquainted with the original of Linnæus: For the explanation of these we must refer the reader to the books above mentioned; and must beg leave here to apprise him of the following

following abbreviations of them: Cal. for calyx; cor. for corol; stam. for stamen; pist. for pistil; per. for pericarp. And as the diminutives of some of these are so perpetually necessary through the course of the work, we have endeavoured to form them so as to be easily familiarized to an English ear, and equally intelligible to the Latin botanist: As leaf, leaflet; stalk, stalklet; valve, valvelet; tooth, toothlet; spathe, spathelet; tube, tubelet; crown, coronet; corol, corollet; calyx, calycle; division, subdivision: Of such diminutives the words tablet, ringlet, rivulet, icicle, particle, &c. are in daily use.

Linnæus has arranged individual vegetables into families, and to these families or genera he has given names; and, as there are perhaps no generic names in our language, we have universally adopted those of our author; thus, the words *triticum*, *hordeum*, *avena*, *secale*, are family names; which include a variety of other grasses, as well as the wheat, barley, oats, and rye, which we cultivate for our food: The generic name *amygdalus* includes the peach as well as the almond; *prunus* includes the cherry, apricot, and laurel, as well as the plumb; and *pyrus* the apple, sweet-flowered crab, and quince,

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as well as the pear ; whence it would have been productive of much confusion, to have given any of these English names to families, which belong to individuals. But in respect to the species or individuals of plants, where the trivial name is expressive of some peculiarity of the plant, we have translated it by an equivalent English word ; where it is merely a cognomen, the word used by Linnæus is retained : The quotations from other works are placed in the index-form, *as our author has disposed them* : And the best received English names are added in their proper places, from Miller, Hudson, Lightfoot, and referred to in the index of synonymes.

The learned reader will perceive, that we have made a slight change in the construction of the sexual distinctions of the classes, on account of the greater delicacy of modern language ; hence the words, one male, and one female, are used in preference to one virility, one feminality. In regard to the general language, we have endeavoured to copy that of Linnæus with the most scrupulous exactness ; for as this illustrious naturalist may be said to have made a language, rather than to have found one, suitable to his purpose ; and appears  
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to have studied every part of his work from the great outline of the system to the most minute circumstance of construction and arrangement, with industry and sagacity almost peculiar to himself, we have translated it as far as might be, page for page, and line for line: And in forming the many necessary compound words, have laboured their conciseness and distinctness, as our author has done, rather than the elegance of their combinations: And as our language allows of various kinds of compounded words, and those terminating either as substantives, adjectives, or participles both active and passive, we were happy to find it as well adapted to our purpose as the Latin, though less so than the Greek. Thus, a wolf-dog, a sky-lark, a ten-pound bill, a one-horse chair, a two-man beetle, a six-penny loaf, five-card loo, a moth-eaten garment, a three-footed stool, a four-wheeled carriage, cloud-compelling, ever-living, are words used either in familiar conversation, or by respectable writers; and give us authority for similar kinds of combinations.

We further propose to add as an appendix, the descriptions of such new discovered plants as may come to our knowledge; and to give

a few plates for the assistance of the young botanist; and to publish the whole as speedily as may be, in monthly numbers; wishing, as far as is in our power, to propagate the knowledge of this important branch of natural history amongst all ranks of people.”

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Mr Henry of Manchester, who lately published a translation of Lavoisier's *Essays, Physical and Chemical*, and who is justly celebrated for many important publications and discoveries in chemistry, is at present engaged, and has made considerable progress in translating Mr Beaumé's *Chymie Experimentale et Raisonnée*, which he intends to publish with notes as soon as his other avocations will permit.

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A very important anatomical work is at present in the press at Edinburgh, and will soon be published, entitled, *Observations on the Structure and Functions of the Nervous System*; illustrated with fifty-five copper-plate tables, containing one hundred and seventy-four figures. By Alexander Monro, M. D. President of the Royal College of Physicians, and Professor

for of Anatomy, Surgery, and Medicine, in the University of Edinburgh.

The publisher of this work, Mr Creech, book-seller in Edinburgh, in an address to the public, gives the following account of it :

“ The above work is, without exception, the most splendid that has ever been produced from the Scottish Press, and is so interesting to philosophy and science, that it requires a further explanation than can be given in a title-page.

What has obtained the denomination of the *nervous system*, is known to be that medium which is interposed between the living principle, and the different organs of which the bodies of animals are composed. The nerves are the instruments of sensation, and it is by their influence that all animal action is performed. They are the source of feeling, and they prompt all our propensities, instincts, and movements. Hence a knowledge of their structure, distribution, and functions, must be extremely important, both to the Philosopher and the Physician, in the study of nature.

Though experiments, discoveries, and observations on the brain, medulla oblongata, spinal marrow, and nervous fibres, occupy the Au-  
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thor's chief attention in this work, yet the reader will find many useful and curious disquisitions with regard to the circulation of the blood, nutrition, sensation, muscular motion, comparative anatomy, and many other articles necessarily connected with the general subject.

But, to give a more explicit idea of the nature of this publication, the editor has subjoined the contents of the chapters.

*Contents of the Work.*

Introduction.

Chap. I. Of the circulation of the blood within the head.

Chap. II. Of the membranes of the brain and cerebellum in general.

Chap. III. Of the communication of the ventricles of the encephalon with each other, as described by former authors.

Chap. IV. Of the communication of the ventricles of the encephalon with each other, by the author.

Chap. V. Of the absorbent vessels of the encephalon, and of the infundibulum and glandula pituitaria.

Chap.

Chap. VI. Of the use of the ventricles of the encephalon.

Chap. VII. Of the cineritious and medullary substances of the brain and cerebellum.

Chap. VIII. Of the supposed origin or formation of the nerves.

Chap. IX. Of the structure of the spinal marrow.

Chap. X. Of the pia mater, the colour and texture of the nerves.

Chap. XI. Conclusions from the three last sections.

Chap. XII. Order of the subsequent chapters mentioned.

Chap. XIII. Of the appearance of the nerves in their course, and particularly of their folds or joints.

Chap. XIV. Of the connection of the nerves in their course in general.

Chap. XV. Of the plexuses of the nerves.

Chap. XVI. Of the connection of the nerves which run in opposite directions, so as to be joined by their small branches.

Chap. XVII. Of the connection of the several cords which compose each of the nerves.

Chap. XVIII. Of the external covering of the trunks of the nerves, and of the cords or funiculi of which they consist.

Chap. XIX. Of the ganglia of the nerves.

Chap. XX. Of spheroidal bodies, which, in some animals, make part of the nervous system.

Chap. XXI. Of some principal nerves which have not been traced by authors with sufficient accuracy.

Chap. XXII. Of the appearance of the nerves viewed with the microscope.

Chap. XXIII. Of the nature of the energy of the nerves.

Chap. XXIV. Of the uses of the nerves in general.

Chap. XXV. Whether the nerves convey the nourishment to our organs.

Chap. XXVI. Of sensation.

Chap. XXVII. Of the termination of the nerves in muscular organs, and, whether the muscles possess a vis insita different from the vis nervea.

Chap. XXVIII. Of the manner and causes of the actions of the muscular organs.

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These subjects are illustrated with 55 copper-plates, containing 174 figures.”

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An ingenious correspondent at Paris, in a letter to Dr Duncan, gives the following account of some intended publications at that place.

“ Mr Vicq d’Azyr is preparing an anatomy of the brain. It will be a large work, consisting of near sixty plates. Those which I have seen are very beautiful, and I am told are exact. He proposes, but that I believe is rather a distant scheme, giving plates of other parts of the human body, and perhaps of giving a complete system. In a few months, M. Romeo de Lisle intends giving a new edition of his *Cristallography*, which will be greatly enlarged, consisting of four volumes, and enriched with a great number of new plates. M. Daubenton also is going to publish. It is to be a *Mineralogy*, and I suppose is to supersede the use of those which are extant. I do not recollect hearing of any other publications.

Chemistry is the subject which is paid most attention to in this place ; but I do not know of any new discovery in it, which is considerable. M. Lavoisier has made use of dephlogisticated

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air, for producing very great heats, and has invented a very simple machine, which supports a blast for an hour and a quarter. Platina is melted in a few seconds; and by continuing the heat, he has melted some of the most refractable precious stones. Mr Bertholet, another of our chemists, has lately wrote a paper upon the destructibility of vegetable acids, which he has read, or is going to read before the academy. He has obtained, by the spontaneous decomposition of cream of tartar, the same quantity of alkali which is obtained by means of fire; so that it seems certain, that none is produced by that operation. He found that this acid was less destructible than that of vinegar, by exposing similar solutions of this salt, and of the sal diureticus; and that the acid of the sal acetosella was still less so than the cream of tartar; and also, that the antiseptic qualities of these salts were in inverse proportion to their destructibility; so that meat kept much longer in a solution of the latter, than in that of either of the former salts."

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Mr Andrew Bell, engraver in Edinburgh, to whose industry and professional abilities, the  
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medical world is much indebted, for his edition of Albinus's tables of the muscles, has been, for some time, engaged in preparing for publication, another important anatomical work. It will consist of anatomical tables of the blood-vessels and nerves, the brain, viscera, and parts of generation of the human body. These organs will be represented in above fifty copper-plates, including the elegant fasciculi of the celebrated Baron Albertus Haller, together with other necessary figures from Eustachius, Ruysch Trew, Du Verney, Monro, Zin, Walterus, &c. The plates selected from these elegant and very expensive works have, we are told, been executed and arranged under the direction of Dr Monro. All of them are brought to such a scale, as to be of the same size with Mr Bell's edition of Albinus ; which, although of a much smaller size than the original, is still a large folio. When therefore the present work is conjoined with the former, they will probably form one of the most complete, useful and accurate systems of anatomical tables that have yet been published.

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Dr Alexander Hamilton, Professor of Midwifery in the University of Edinburgh, who has

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lately been presented with an honorary diploma of Doctor of Medicine from the University of St Andrews, is preparing for publication, a second edition of his Elements of the Practice of Midwifery, in which we are informed there will be many alterations and additions, particularly in the practical part.

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A third volume of Dr Cullen's First Lines of the Practice of Medicine, has been for a considerable time past in the press at this place, and will probably be soon published.

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A new edition of the Pharmacopœia of the Royal College of Physicians in Edinburgh, prepared when Dr Monro was President of the College, is now almost printed off, and will be published in a few weeks.

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Mr John M'Nab, surgeon in the service of the Hudson's Bay Company, in a letter to Dr Duncan, dated at Fort Albany, 12th September 1782, gives the following information respecting a subject which has of late much engaged the attention of philosophers.

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“ Last winter, the degree of cold at which mercury freezes was ascertained here with very great accuracy, by instruments sent from the Royal Society. This curious phœnomenon occurred regularly at forty degrees below the cypher in Fahrenheit’s scale.

On the 7th of January 1781, a very astonishing and sudden degree of cold was observed at East Mains-house, in Hudson’s Bay. At eight o’clock in the morning, when the barometer stood at 30, 46, a thermometer graduated to 250 degrees below the cypher, was observed to stand at 70 below the cypher. But in less than half an hour, it sunk completely into the bulb. In a short time, however, it began to rise again, and in a few minutes after nine, it was observed at 250, the bottom of the scale; in the space of half an hour, it rose gradually so as to reach within forty degrees of the cypher.”

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The medical practitioners at Liverpool have lately established a plan for the inoculation of the poor, which, if properly imitated over the kingdom in general, would unquestionably be productive of very great national advantages. To demonstrate this, we shall here present our

readers with the following address, which was circulated among the inhabitants of Liverpool, on the subject of general inoculation :

“ There is perhaps no disease that has made more dreadful ravages among the human species than the small-pox. On its first introduction into Europe, its progress was almost every where marked by death ; every rank of society was thinned, whole armies were cut off, and provinces depopulated. In the succession of ages, experience, by introducing a more proper treatment of the disorder, has taught us to disarm this pestilence of part of its force ; but its operation is yet so fatal, as to entitle it to the first place in the list of those diseases which are most destructive to human nature.

By calculations formed from the bills of mortality at Chester in the year 1778, it was proved, that nearly a sixth part of all the deaths which happened in that city, was to be ascribed to the natural small-pox. Similar calculations made at Leeds, in the beginning of the present year, have demonstrated that this malady has been still more fatal there, having cut off one-fifth of all those who have died in that town, whether from disease or old age. And the calculations  
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of Dr Dobson shew, that the deaths to be ascribed to the natural small-pox in Liverpool, have even exceeded the proportion of one in five.

These facts are truly alarming, and more especially when we consider, that this destruction is not made among the aged and infirm, who, in the ordinary course of nature, could not long survive, but among those who are advancing towards maturity, on whom the hopes of their parents are founded, and on whom the future strength of the community depends. Happily for mankind, Providence has not left us without defence against the havock of the small-pox. The practice of inoculation has been found to remove almost all the danger arising from the disease; and to make this practice universally adopted, it would seem, that nothing more is necessary, than to make its salutary influence universally known.

It is evident, from observations made in every part of the kingdom, that we shall not overrate the mortality of the natural small-pox, if we calculate that one in six of all whom it attacks is carried off in the course of the disorder. But the most unfavourable account does not estimate more than one death in every hundred cases

cases in which the infection is communicated by inoculation ; and, according to many computations, there has not happened one in five hundred. These truths, established on the most extensive observations, require no comment ; they speak more powerfully in favour of this practice, than any arguments that could possibly be urged.

The wealthier inhabitants of this town have, in general, for many years past, availed themselves of the advantages of inoculation ; but it has made little progress among the poor, for reasons which are sufficiently obvious. Many of them are ignorant of the benefit resulting from it ; many of them, no doubt, are prejudiced against it ; and some of them, it is to be feared, have been prevented from inoculating their children, by a doubt of procuring proper medical assistance. If, from such causes, the progress of inoculation among the lower classes has been obstructed, the misfortune to the community has been of no trifling nature. In the town of Leeds, containing eighteen thousand inhabitants, it has been found, that one hundred die yearly of the natural small-pox ; and we may conclude, that this disease cuts off two hundred  
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at least every year in this town, which contains double the number of inhabitants, and where the contagion may be said to be always present, from the great communication with other parts, and from the partial practice of inoculation among the higher ranks. This reasoning is confirmed by facts, Dr Dobson having found, in the course of three years observations, that upwards of two hundred die annually in Liverpool of the natural small-pox. According to this computation, four thousand persons at least have been carried off by the natural small-pox, in the town of Liverpool, within the last twenty years. And when we consider that scarcely one in two hundred dies under inoculation, we cannot but lament over those four thousand victims, most of whom might have been rescued from the grave, and, by their labour, and by the increase of their offspring, have added to the strength and opulence of the nation. These observations may be extended from the town of Liverpool to the nation at large. In London alone, within the last fifty years, nearly one hundred and ten thousand persons have died of the natural small-pox ; and it is probable, that Great Britain, during the same period, has suffered

ferred the loss of a million of inhabitants from this dreadful disease.

Truths of so important and so melancholy a nature, it is hoped, will ere long attract the attention of the legislature; but in the mean time, it is certainly the duty of every individual to exert his abilities in promoting, within his own circle, the general practice of inoculation; by which means alone we shall be able to prevent the mortal ravages which have been described.

The attention which has been paid in Liverpool to the relief of the poor, when afflicted by disease, reflects the highest honour on the charity and munificence of its inhabitants. And there is every reason to believe, that the humanity of the more opulent part of the community will induce them to promote, by every proper method, a plan for a *general inoculation of the poor*, from whose labour and industry their wealth and consequence are derived. If the facts now advanced be founded on truth (and the public are invited to examine them thoroughly), it is hoped that no good man will remain uninterested in the success of such a proposal. As the matter now stands, inoculation in Liverpool is confined almost exclusively to the  
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higher ranks. But this practice, though beneficial to them, it is much to be feared, proves a serious misfortune to the inhabitants at large ; for by this means the contagion is never suffered to be extinguished, and the children of the poor, catching the infection in the natural way, fall victims to the disease. To imagine that any person, who approves of inoculation in his own family, should oppose its being extended to every class of men, is to suppose a degree of cruelty and injustice that few would chuse to avow. From the enlightened inhabitants of Liverpool, a conduct more liberal may be expected. They will wish that the blessings which they themselves reap from this practice may be diffused among the poor and helpless ; for this purpose their active influence will be necessary ; and there is every reason to hope that they will be forward in promoting so generous and so useful a plan.

It is not the design of this address to examine all the objections which may be made to a general inoculation. Most of these will, on consideration, appear to be founded on prejudice and error. There is one only which deserves to be particularly mentioned : It may be said, that  
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since some persons, from mistaken principles, may obstinately refuse to be inoculated, or to inoculate their children, who yet cannot remove themselves or their families from town, it would seem unjust, without their consent, to expose them to the danger which they might incur during a general inoculation. But this objection is likewise founded on a mistake, which it will be proper to explain. Such persons as are unhappily prevented from being inoculated, cannot reasonably expect, in the present state of things, long to escape the natural small-pox. They must be seized with the disease, without warning, and without preparation. But if the plan for a general inoculation, at stated periods, be adopted, they will be aware of their danger, and have it in their power to prepare for the disease before it commences. They will likewise, if they catch the infection, have the small-pox in the most favourable season of the year; whereas now they are liable to be infected in every season. The quantity of contagion generated is thought to be in proportion to the number of the pustules; and it is well known, that, taking one patient with another, the number of pustules is ten times greater when the disease is contracted  
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in the natural way, than when it is communicated by inoculation. If this be true, there will be as much danger from a hundred patients in the natural small-pox, as from a thousand under inoculation.—And hence, if there be twelve hundred persons seized with the natural small-pox in Liverpool, in the course of the year (and the number cannot be estimated lower), these will produce as much contagious matter as twelve thousand who have been inoculated. But it cannot be supposed, that there are now six thousand of the inhabitants of Liverpool who have not had the small-pox ; and if inoculation become once general, the persons to be inoculated yearly will not exceed a fifth part of that number.

Thus, should there remain a few persons who are prevented by prejudice from reaping the benefit of inoculation, it will be their interest to promote the general practice of it in the town ; since by such means, the quantity of contagious matter will be greatly diminished, the danger of contracting the infection will be lessened by being foreseen, and their security will be exceedingly increased when there shall remain only a few persons in Liverpool liable to be affected by  
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the disease. To these reasonings, it may be added, that plans for a general inoculation at Chester and Leeds have been carried into execution with the most salutary effects.

The gentlemen of the medical faculty in this town having, at a general meeting, taken this important subject under consideration, were unanimously of opinion, that the general practice of inoculation in Liverpool, at stated periods, would be of the utmost advantage. They therefore considered themselves bound, as good men and good citizens, to lay their opinion, and the grounds on which it is founded, before the public. And to give this scheme every assistance in their power, they offer their attendance gratis to all who are unable to pay for it. They know that a proposal which aims at saving the lives of their fellow-creatures will come with peculiar propriety from them; they are sensible that such a proposal will at all times be favourably received; but they hope it will meet with particular attention at this important period, when the strength of the nation is wasting under the calamities of war, and our countrymen are perishing by the sword, or by the more destructive

structive influence of climate, in every quarter of the globe."

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A large and important botanical work is at present carrying on in Russia under the protection of the Empress. To give our readers a proper idea of the nature of this undertaking, we shall here present them with the following account of it, written by Professor Pallas, under whose direction it is to be executed.

*Annonce d'un Ouvrage Botanique sur les Arbres, Arbustes et Plantes de l'Empire de Russie, qui sera publié par Ordre et sous les Auspices de sa Majesté Imperiale.*

TANDIS que l'Auguste Legislatrice du Nord s'occupe du bonheur de ses sujets, par l'introduction de nouvelles loix, d'une administration de justice et de finance plus analogue à ses grandes vuës, par la reforme de l'education nationale, l'encouragement des sciences, des arts et du commerce, par ces soins enfin de former l'esprit des Princes qui doivent un jour devenir les émules de sa grandeur ; cette Souveraine sage et éclairée ne dedaigne pas les details qui peuvent tendre à la perfection de son ouvrage.

Sa Majesté Imperiale s'occupant entre autres d'un nouveau reglement pour la conservation des forêts de son empire, et desirant en même tems de perfectionner l'economie rurale et de soulager l'humanité par une connaissance precise des plantes utiles que le sol de son vaste empire produit ; elle a conçu l'idée d'un ouvrage botanique qui put remplir ce but : Idée digne de l'esprit createur de l'Auguste Protectrice des Sciences, dont la munificence pour l'avancement des connaissances humaines a brillé depuis son avènement au trône, par le renouvellement de l'academie des sciences et l'institution de celle des arts ; par ces voyages dispendieux d'observateurs, tant astronomes, que naturalistes, dont le nombre et l'importance a surpassé tout ce que les autres nations ont fait dans ce siècle ; par les encouragements accordés sans nombre aux savans etrangers et regnicoles ; par l'emploi de sommes annuelles considerables pour la traduction des meilleurs ouvrages de tout genre en langue nationale ; enfin par l'illustre exemple qu'elle a donné elle même dans la carrière des lettres.

Sa Majesté Imperiale voulant que l'ouvrage projeté soit entierement executé à ses depens,  
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dans l'intention seule de contribuer au bien-être et à l'instruction des hommes ; on n'a ni souscription, ni autre engagement à proposer au public ; mais puisque tous ceux, que ce grand ouvrage intercessera, doivent, en y applaudissant, desirer d'avance quelque notion de ce qu'on doit en attendre, j'ai crû qu'il était de mon devoir de satisfaire la curiosité du public par l'esquisse succincte que j'en vais donner. Voici en peu de mots le plan, tel qu'il a été approuvé par sa Majesté Imperiale.

L'ouvrage pour lequel sa Majesté Imperiale a fait assigner les fonds nécessaires, sera exécuté avec tout le luxe typographique qui convient à la magnificence d'une telle entreprise. Les planches qui doivent représenter les plantes de grandeur naturelle, seront du grand format des beaux ouvrages botaniques de Mr Jacquin, légèrement gravées et colorées avec tout le soin possible sur des originaux faits d'après nature. Le texte qui contiendra les descriptions et détails nécessaires sur la nature et l'usage de toutes les plantes indigènes, paroîtra en Russe et en Latin, de la même grandeur & sur le même papier de Hollande que les planches.

L'objet principal de l'ouvrage que sa Majesté Imperiale veut généreusement donner à son

peuple et à la republique des lettres étant l'utilité publique, les plantes immédiatement utiles à l'humanité tiendront donc le premier rang dans l'exécution. Pour ne pas rendre l'ouvrage inutilement volumineux on retranchera d'abord de la suite des planches les arbres et les plantes les plus généralement connues par des noms vulgaires, surtout lorsqu'il ne sauroit resulter de cette omission aucune meprise dangereuse pour l'humanité. Le texte n'en donnera pas moins les details utile à connaitre sur la nature et l'usage de ces especes vulgaires. Le même sera observé pour les especes aussi communes en Europe qu'en Russie, dont on trouve les figures dans les ouvrages botaniques les plus connus, et qui n'annoncent d'ailleurs aucune vertu particulière.

On s'attachera au contraire à donner des gravures aussi parfaites que possible de toutes les especes affectées à l'empire, ou dont l'utilité n'est que peu connue dans le pays qui les produit, & qui souvent par cette raison même n'ont pas de noms usités. Les especes purement curieuses & rares feront un objet secondaire, qu'on aura soin de remplir à la satisfaction des botanistes.

D'après ce plan j'estime que cinq à six cent planches gravées epuiseront à peu près, dans le  
total

total des vegetaux indigenes de l'empire Russie, toutes les especes utiles & rares dont on pourra desirer les figures. De toutes celles qui peuvent remplir une planche de la grandeur ci-dessus enoncée, on ne fera représenter qu'une seule espece par planche, ayant soin d'en donner non seulement les fleurs, mais aussi le fruit, & les variétés accidentelles qu'on aura observées. Mais pour les plantes naines et petites, qui sont d'un même genre, par exemple, les saxifrages, les mousses, &c. on se permettra de placer plusieurs especes sur la même planche, pour mieux la remplir.

Dans un ouvrage de la nature de celui-ci il n'est pas possible d'observer aucun ordre methodique. Mais on tachera du moins de placer ensemble les especes d'un même genre & les premiers cahiers contiendront surtout les arbres & arbrustes remarquables. Chaque cahier sera de cinquante planches, dont deux pourront avec le texte former un volume. On ne peut encore fixer le terme quand le premier cahier pourra être achevé; mais on tâchera d'en fournir du moins un par an & de presser l'ouvrage autant que le nombre d'artistes exercés pourra y suffire.

Le choix que sa Majesté Imperiale a daigné faire de moi, pour executer, sous ses auspices,

un ouvrage de cette importance & d'une utilité si generale m'honore infiniment ; aussi employerai-je tous mes efforts pour m'en rendre digne ; & si l'exécution pourroit egaler mon zèle, j'oserois espérer d'en faire un monument digne de la protection & du siècle de Catherine Seconde.  
*S. Pétersbourg, ce 28 Juillet v. St. 1782.*

\* \* \* \*

The annual prize of the year 1781, given by the Harveian Society of Edinburgh, with the view of promoting experimental enquiry among the students of medicine at that place, was adjudged to a dissertation, to which was prefixed the following motto :

*Valeat quantum valere potest.*

Upon opening the sealed letter which accompanied this dissertation, it was found to be written by Dr Jonathan Stokes of Worcester-shire. The prize was publicly delivered to Dr Stokes, in the hall of the Dispensary of Edinburgh, by Dr Webster, with a suitable address, recommending to the successful candidate, and to every diligent medical student, either ambitious of obtaining literary honour, or anxious to improve his profession, the investigation of truth on the sure basis of experiment. Dr Webster at the  
 same

same time announced as the prize-question for 1782, "An enquiry concerning the nature and properties of milk." At the above annual meeting, instituted in honour of the illustrious Dr Harvey, and held on the anniversary of his birth-day, the Harveian oration for 1782, the subject of which was an account of the life, writings, and character of the late Dr Robert Whyte, was delivered by Dr Duncan.

Among the dissertations given in to the Secretaries of the Harveian Society by the 1st of January 1783, on the subject of milk, the judges being divided in opinion as to the comparative merit of two dissertations, it was determined that an equal prize should be bestowed on each. To the one was prefixed, for a motto,

*Lac mihi non æstate novum, non frigore desit ;*  
to the other,

*Quem si non tenuit magnis tamen excidit ausis.*

Upon opening the sealed letters which accompanied them, the first was found to be written by Mr Samuel Ferris of Wiltshire, and the last by Mr Richard Kentish of Yorkshire. The prizes will be delivered to these gentlemen by Dr Duncan after the Harveian oration for 1783, which will be given by Dr Webster.

The

The subject proposed for the prize of 1783, is “ An enquiry concerning the nature and properties of the Peruvian bark, and the comparative powers of the red and quilled Peruvian bark.” Dissertations on this subject, competing for the prize, must be delivered to Drs Duncan or Webster, Secretaries to the Harveian Society, on or before the 1st of January 1784. To each of the dissertations a motto must be prefixed, and the same motto must be put upon the back of a sealed letter, containing the name of the author. All the dissertations, excepting those to which prizes are adjudged, will be returned to any place that may be directed, with the letters which accompany them unopened. Thus the names of unsuccessful candidates are known only to those to whom they may themselves communicate it.

\* \* \* \*

On the 13th of March 1782, died at Edinburgh, Mr Jacob Pattifson, student of medicine, His unwearied industry, extensive knowledge, happy genius, and amiable manners, conciliated to a very high degree, the affection and esteem of all who had the pleasure of his acquaintance. His remains are interred in the church-yard of  
St

St Cuthbert's chapel at Edinburgh, near those of the late ingenious Mr Charles Darwin, in the burial ground which belongs to Dr Duncan. An elegant monument is erected to his memory by the companions of his studies, his fellow-members in three literary societies, in all of which he made a very distinguished figure. They have expressed their regard for his memory in the following inscription which is cut on a marble tablet in the basis of the monument.

Hoc in agello funesto sepultæ sunt reliquiæ  
 JACOB PATTISSON de WITHAM, in comitatu de ESSEX,  
 Qui, in Academia Edinenfi,  
 Non minus fauste quam diligenter, in rem medicam incumbibat:  
 Florentem ætate,  
 Ob ingenii acumen, moreſque imprimis amabiles  
 Omnibus quibus notus cariffimum,  
 Febris lethalis aggreſſa,  
 Procul patria domo, inter lachrymas ac ſuſpiria ſociorum,  
 Subito oppreſſit.  
 Hocce monumentum, tres Societates,  
 REGIA MEDICA, nempe, SPECULATIVA, et PHYSICA,  
 Quarum omnium ſimul Præſes fuit,  
 Non ut famæ ejus conſulerent, quippe illius parum indigiæ opis,  
 Sed ut animos, nec amicitia, nec meriti inſignis,  
 Immemores oſtenderent,  
 Conjunctim extruendum curarunt.  
 Obiit III. Idus Martii, A. D. 1782. An. Æt. 23.  
 The

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The Royal Society of Medicine at Paris, have proposed the following prize-question: What are the diseases that prevail most commonly among the troops during the summer, and in very hot weather? What is the most simple and least expensive method of treating them? And, lastly, what are the means to be employed for preventing or moderating their effects in very hot climates, as the Windward or Leeward Islands? The dissertations of competitors, written in the Latin or French languages, must be sent to M. Vicq d'Azyr, secretary to the Society, by the 1st of December 1783.

\* \* \* \*

The Royal Academy of Sciences at Paris, have offered a premium of 2400 livres to the person who shall discover the easiest and cheapest process for decomposing sea-salt, and extracting the alkali that serves as its basis, free from any acid or other combination, provided the value of this mineral alkali does not exceed the price of that which is procured from the best foreign soda.

The dissertations on this subject, written in French or Latin, must be sent to the Marquis de

de Condorcet, secretary to the Academy, before Easter 1783.

\* \* \* \*

The Dutch Society of Sciences at Haerlem, have proposed the following enquiry as the subject of a prize-dissertation: 1. Une description de l'appareil le plus propre à faire des expériences sur l'air condensé, de la façon la plus commode et plus assurée. 2. De rechercher avec cet appareil l'action de l'air condensé, dans de cas differens de s'occuper entr' autre de la vie animale, de la croissance des plantes et de l'inflammabilité des différentes especes d'air. Et 3. D'exposer quelles suites, ou quelles nouvelles connoissances, on pourroit en deduire.

Dissertations on this subject must be transmitted to Mr C. C. H. Vander Aa, secretary to the Society by the 1st of January 1785.

By the same Society, the following question also is proposed:

Par quelles regles de conduite, fondées sur la theorie & confirmées par l'experiences, pourroit-on conserver la santé de ceux, qui, faisant le voyage des Grandes Indes, eprouvent les effets pernicioeux d'un changement extreme de climat, & de façon de vivre? Independemment  
des

des regles generales, pourroit-on ne indiquer des particulieres que varieroient suivant les differentes classes des individus, aux quelles on devoit les appliquer ?

\* \* \* \*

Dr Hawes, at the close of his lectures on animation, proposed the following questions for two prize-medals, subject to the usual regulations.

Are there any positive signs of the extinction of life? If so, what are they? Or if there are not, is putrefaction a certain criterion of death?

The dissertations on this subject were directed to be left, before the end of September 1782, with Dr Fothergill, at his house in Harpur, street, Red Lion Square, who, together with Drs Letsom, Jebb and Whitehead, were appointed to adjudge the medals. We have not heard whether these prizes have yet been bestowed on any competitors.

\* \* \* \*

The Royal Academy of Sciences at Paris have proposed the following subject for an extraordinary prize-dissertation for the year 1783.

De determiner la nature et les causes des maladies aux quelles sont exposés les doreurs au feu,

feu, ou sur métaux; et la meilleure manière de les préserver de ces maladies, soit par des moyens physiques, soit par des moyens mécaniques.

Dissertations on this subject are ordered to be transmitted to the Secretary of the Academy by the 15th of February 1783.

\* \* \* \*

We hear, that an improved edition of Dr Lewis's New Dispensatory will be published in Edinburgh during the course of this year. The improvements in chemistry since his time are numerous and important. The Edinburgh Pharmacopœia has been twice materially reformed. Several new medicines have been thought worthy of a place in the Materia Medica; others have been expunged; and the operation of many medicines on the human body are now explained in a very different manner. These considerations render it very desirable, that a book on so good a plan, and so universally read, should be improved to the utmost. This edition is also to have several useful tables, and a set of extemporaneous prescriptions, used by the most eminent practitioners in London and Edinburgh, after the plan of Dr Berkenhout's Pharmacopœia.

\* \* \* \*

On the 19th of January 1782, died at London, in the seventy-eight year of his age, Sir John Pringle, Bart. Physician-extraordinary to the King, and Physician to the Queen. During a life spent in active industry, Sir John Pringle not only arrived at the head of his profession in the metropolis of Britain, but obtained the esteem of every genuine lover of science; and, as an undubitable testimony of the respect in which he was held by the philosophical world, he was elected president of the Royal Society of London. The duties of this important and honourable office he discharged for several years with the most faithful punctuality. But finding that the approaches of old age rendered the fatigues of business greater than he could easily accomplish, he not only retired from the practice of medicine, but also from the presidency of the Royal Society, with an intention of spending the evening of his life among a circle of select friends. This circumstance, as well as his judicious last will, is a stronger proof of unimpaired judgment, than if he had continued to fill an office to which his years had rendered him unequal. He bequeathed among his relations a  
considerable

considerable' fortune, which was so distributed that, while his nearest relations had no ground for complaint, it will serve to afford comfort during the remainder of life to some others to whom fortune had been less favourable. He has left to the College of Physicians in Edinburgh, his Medical Annotations, consisting of ten volumes in quarto, principally written with his hand own. But these are intended solely for the private use of the members, and are given on the express condition, that they shall never be published : Not that he could have any desire of with-holding from the medical world what would in any degree tend to the improvement of the profession ; but because he judged several cases and observations which they contained, in different respects unfit for the public eye. The observations which he published on army-diseases many years ago, have extended his fame through Europe, and will transmit his name to posterity as a learned and intelligent Physician.

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On the 29th of April, died at Hackney, near London, Dr Thomas Dawson, formerly Physician to the London-Hospital, and deservedly celebrated for several useful medical publications.

On

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On the 13th of May, died at London, Dr Daniel-Charles Solander. He was a native of Sweden, and educated at the university of Upsal, where he obtained the degree of Doctor of Medicine. That of Doctor of Laws was afterwards conferred upon him by the university of Oxford. Dr Solander's strong propensity for the pursuit of natural knowledge, was probably not a little increased by the patronage and encouragement of his preceptor the celebrated Sir Charles Linnæus; while the zeal which he shewed for these branches of literature, particularly for botany, conciliated the esteem and affection of that eminent Professor. When Dr Solander went from Upsal to London in the prosecution of his studies, Linnæus furnished him with introductory letters to those learned men who were his principal correspondents in the metropolis of Britain. In these letters, among other strong expressions of regard, he is said to have employed the following sentence: "*Omni-*  
"*um discipulorum, quos unquam habui, dilectissi-*  
"*mus.*" The footing thus obtained, Dr Solander soon improved by agreeable manners and extensive knowledge. In no long time he con-  
tracted

tracted intimacies with the most eminent philosophers in London, particularly with Sir Joseph Banks, the President of the Royal Society, and one of the first literary characters in Europe. He was the companion of Sir Joseph in those different voyages which he made for the sole purpose of extending natural knowledge, and which will do immortal honour to the memory of both. When he was not thus engaged, his time was principally spent in the British Museum, where he had obtained an appointment in every respect suited to his philosophical disposition. And in discharging that part of the duties of his office which led him to shew that most valuable collection to different visitors, it was hardly possible to conceive a more agreeable union of the manners of the gentleman with the knowledge of the philosopher. While he was engaged in conversation with his usual cheerfulness at the house of his friend Sir Joseph Banks, he was suddenly attacked with a fit of apoplexy, which, in a few days, notwithstanding the best medical assistance, terminated in his death; an event sincerely regretted by all who had the honour of his acquaintance, and by which the lite-

rature and philosophy of London sustained a real loss.

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On the 16th of May, died of a pulmonary consumption, at Reading in Berkshire, on his way to Ireland, Dr Dennis Ryan, late assistant Physician to the Military Hospital in Jamaica, a young man of great genius and uncommon industry. He communicated to the public, through the channel of this work, and of the London Medical Journal, several important observations; and while he prosecuted his studies at Paris, he made a Latin translation of Dr Duncan's Medical Cases, which, we hear, will soon be published under the direction of Dr Sandifort of Rotterdam, brother to the eminent Professor Sandifort of Leyden.

\* \* \* \*

On the 13th of August, died at Naples, Dr Alexander-Monro Drummond, a young Physician of great learning and very uncommon talents. He was born and educated at Edinburgh. After the necessary instruction in the languages, and other preliminary branches of knowledge, he betook himself to the study of medicine; and during the course of ten years, he was peculiar-

ly remarkable for the most regular attendance to every medical teacher, both public and private, and for unremitting attention in the pursuit of all the branches of medical science. In the year 1771, he obtained the degree of Doctor of Medicine from the university of Edinburgh, with uncommon marks of distinction from that learned body. On that occasion, he published an elegant and elaborate inaugural dissertation, entitled, *Commentarius de Febris arcendis discutendisque*. Upon leaving Edinburgh, after remaining some time in London, where he cultivated the acquaintance and obtained the esteem of many learned men, he went to the continent of Europe in company with the celebrated Dr Ingenhouze. After visiting Paris, Leyden, Goettingen, Vienna, and other places most remarkable for eminent schools of medicine, he joined the Earl of Winchelsea and Lord Algernon-Percy on a tour into Greece, Egypt, and other parts of the Turkish dominions. About the time when he was leaving Italy on this expedition, he received information that he was elected Professor of the Theory of Medicine in the university of Edinburgh, which had become vacant by the death of Dr Gregory, and the advancement of

Dr Cullen to the practical chair. This, however, he did not consider as an object sufficient to interrupt his intended plan. And the patrons of the university, unwilling to lose such an addition to their medical college, resolved to keep the place vacant till his return. They appointed Dr Duncan to fill the theoretical chair as an interim teacher; and for two years he discharged the duties of that office much to the satisfaction of audiences uncommonly numerous for the lectures on the theory of medicine even in the university of Edinburgh. Upon Dr Drummond's return to Europe, having formed greater plans, he declined accepting of the professorship at Edinburgh. He communicated to his friends an intention of settling in London; but, for private reasons, he resolved to reside for some time in Naples. There he was very highly esteemed, and practised medicine, both among the natives and British visitors, with such singular success, that his advice was ardently sought for in cases of the greatest difficulty and danger. But although his own circumstances were very narrow, he could never be prevailed upon to accept of a fee, even from the most opulent of his countrymen.

countrymen. Among other literary pursuits at Naples, Dr Drummond is said to have been engaged in writing an account of his travels. But an accidental fall from his horse, by which his skull was fractured, proved the cause of his death at an early period of life, and has probably deprived the world of some valuable publications.

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On the 3d of January 1783, died suddenly, at Edinburgh, Dr Thomas Young, professor of midwifery in the university, and a practitioner of the first eminence in that city. When Dr Young was first appointed professor, he was one of the members of the College of Surgeons in Edinburgh. But afterwards resolving to join the College of Physicians, he took the degree of Doctor of Medicine ; on that occasion he wrote an excellent experimental dissertation *De Lacte*, in which are contained many important and useful observations respecting that fluid. He taught and practised midwifery for many years with great reputation. He wrote several ingenious papers on different medical subjects, particularly an essay on the puerperal fever, which were read in

the Philosophical Society of Edinburgh, and which may probably be published in course of the future volumes of their Transactions. Dr Young, some years before his death, finding that his academical duties and private practice were a greater fatigue than he could easily overtake, and being desirous of introducing into the university, as his coadjutor and colleague, Dr Alexander Hamilton, who had acquired very high reputation in the line of midwifery, both as a teacher, a practitioner, and an author, he resigned his professorship, and was in a few days afterwards again elected to that office in conjunction with Dr Hamilton. In this, while he demonstrated that liberality of sentiment which eminently distinguished his character, by overlooking a former rivalry, he consulted in a high degree the interest of the university and the public, by introducing among the number of professors a man whose reputation was already established, and who had given abundant proof of uncommon abilities as a teacher, by having for several years given private lectures with great success.

Dr Young, when apparently in a state of the best health, was suddenly attacked with a fit of  
apoplexy,

apoplexy, in the house of an acquaintance, and died in a few hours. He had not, however, left to his last hour the destination of a very ample fortune which he possessed. Having no children, by a will found in his repositories, he directed, after a handsome provision for his wife, the division of it among his relations; and, with no less good sense than humanity, he made particular provision for those who stood most in need of his assistance.

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About the middle of February, died at Lisbon, where he had gone for the recovery of his health, Dr Peter Duguid-Leslie, Physician at Durham, where he had practised with reputation for several years, and lived with much esteem. He was a young man of genius and industry, and ardent in the pursuit of medical and philosophical knowledge. Upon taking the degree of Doctor of Medicine in the university of Edinburgh, in the year 1775, he published an inaugural dissertation *De Caloris Animalium Causa*, in which he adopted and defended a hypothesis concerning animal heat proposed and taught by Dr Duncan. His observations on this subject he afterwards presented to the public

in an English dress, entitled, A philosophical Enquiry into the cause of Animal Heat, with incidental observations on several philosophical and chemical questions connected with the subject. From that work Dr Leslie acquired considerable reputation in the philosophical world; and not long after it was published, he had the honour of being elected a member of the Royal Society of London. He was engaged in another literary work, on the subject of fire, when he was attacked with the influenza, about the beginning of June 1782. This terminating in phthisis pulmonalis, at length proved fatal.

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On Monday the 31st of March died at London, Dr William Hunter, Physician-extraordinary to the Queen, Teacher of Anatomy in London, and member of many different learned societies for the advancement of useful knowledge.

This celebrated anatomist was a native of Kilbryde in the county of Lanerk. His father, designing him for the church of Scotland, sent him at a proper age, to the college of Glasgow; but having spent five years in regular academical attendance there, he began to feel strong objections to theological studies; and happening to become

become acquainted with Dr Cullen, the present celebrated Professor at Edinburgh, who was at that time just established in practice at Hamilton, he was persuaded by Dr Cullen to apply himself to physic. Dr Cullen's friendship made it easy to obtain his father's consent. He was taken into the Doctor's house, where he lived two years. Dr Cullen at all times was happy in communicating knowledge to his pupils, and still more remarkable for inspiring them with an enthusiastic love of study. This was a most fortunate circumstance for Mr Hunter, whose uncommon application and improvement in the line of his profession, in a short time recommended him to the notice and patronage of professors of the first anatomical celebrity.

In Scotland, if we except Edinburgh, there is not that distinction between the branches of physic that prevails in England. The physicians generally dispense their own medicines, and likewise practise surgery. Dr Cullen, though an enthusiastic cultivator of physic and chemistry, had always a dislike to the surgical part of his practice. It was therefore agreed between him and Mr Hunter, that the latter should go first to Edinburgh, and then  
to

to London, in order to see the practice of the hospitals, and improve himself in anatomy and surgery, and that, at his return to Hamilton, a partnership should take place between them.

Mr Hunter brought with him to London a letter of introduction to his countryman Dr James Douglas, who was at that time in high reputation as a physician and man-midwife, and who is well known by his Treatise on the Muscles, and other works.

Dr Douglas recommended it to him to attend St George's hospital, and Dr Nichol's lectures, as a perpetual pupil, for the opportunity of learning all his arts in making anatomical preparations. And at the end of the season, when he was preparing to set out on his return to Hamilton, Dr Douglas persuaded him to change his proposed plan, and prevailed on him to go to Paris and to Holland with his son, at that time a student of physic, and afterwards to settle in London, and to teach anatomy. Mr Hunter communicated this proposal, and the arguments which Dr Douglas used, to Dr Cullen, who, believing that it was a fairer prospect, with his usual generosity, readily gave his consent.

After

After the death of his patron Dr Douglas, Mr Hunter began to teach anatomy in London. His easy, agreeable manner of lecturing, the new and clear points of view in which he placed the different parts of his subject, added to the number, and, till then unknown, elegance of his preparations, drew to him a great number of pupils. He soon became eminent in his profession, enriched the art with many important discoveries, and for many years shone unrivalled in the wide and fruitful field of anatomy.

In or about 1747, Mr Hunter was admitted a member of the Surgeons Company. His anatomical reputation soon procured him an extensive practice, particularly in midwifery; and when he came to be established, the University of Glasgow, proud to reckon him amongst her sons, complimented him with the degree of Doctor of Medicine. In 1756, he was admitted a member of the College of Physicians, and soon afterwards was elected Fellow of the Royal Society, having made himself known by an ingenious paper, “on the Structure of Cartilages,” published in the Philosophical Transactions so early as 1743. He has since that, at different times,  
communicated

communicated several other valuable papers to the Society.

When our present amiable Queen became pregnant, Dr Hunter was consulted, and, at the same time, honoured with the appointment of Physician-extraordinary to her Majesty. When the Royal Academy of Arts was founded, he was nominated Professor of Anatomy to that institution; and lately, upon the death of one of the eight foreign associates of the Academy of Sciences at Paris, he was elected to supply the vacancy. To consider him as a teacher, is to view him in his most amiable character; perspicuity, unaffected modesty, and a desire of being useful, were his peculiar characteristics; and he was most happy in blending the *utile* with the *dulce*, by introducing apposite and pleasing stories, to illustrate and enliven the more abstruse parts of anatomy; thus fixing the attention of the volatile and the giddy, and enriching the minds of all with useful knowledge.

Employed, as Dr Hunter had been, for a long series of years, by persons of the highest distinction, and consulted as an anatomist in difficult cases of surgery by all ranks of people, and from every part of the kingdom, his gains must have  
been

been immense ; and he employed them in a manner the most liberal, for the improvement of science. Having never married, and being averse to ostentation and luxury, he always conducted his domestic expences on a plan adapted to his profession ; and his accumulated fees were expended in erecting and furnishing a museum, which, considered in every point of view, is certainly not to be equalled in Europe. We shall say nothing of the anatomical preparations it contains, because it will be easily conceived, that a person of the Doctor's disposition, who had spent near half a century in the pursuit of a favourite object, must have amassed every thing most curious and valuable upon that subject. But the specimens of human and comparative anatomy, form only a small part of the *Hunterian Museum*. His collection of scarce and valuable books is to be equalled only by royal libraries ; and his cabinet of medals, particularly Greek and Roman, is far more valuable than even the imperial collection at Vienna.

The expence of building his house and museum in Windmill-street, and furnishing the latter, is said to have approached near to 100,000 l. His Plates of the Gravid Uterus, and his other  
publications,

publications, sufficiently evince his profound knowledge and unwearied industry; and the Descriptions of his Greek Coins demonstrates his boundless munificence. It is much to be feared, that the other works he had in hand at the time of his death, are left too incomplete for the public eye. Thus he toiled through a long life for the good of mankind; and it may be truly said, that he did not live and toil in vain. His amusing and instructive talents, his facetiousness, his eloquence, his science, his good œconomy in acquiring wealth, his well-directed liberality in employing it, are all secured by durable monuments.

Dr Hunter had been ill for some time, and had so far recovered as to be able to sit up. While in this state, his anxiety for his pupils made him wish to give the introductory lecture to the operations of surgery; he accordingly gave it, and the fatigue he underwent occasioned a relapse of his disease, which terminated fatally, notwithstanding the utmost skill and attention of his Physicians.

Dr Hunter has bequeathed his very valuable museum to the University of Glasgow. But the use of it for thirty years is reserved to the ingenious Mr Cruikshank, who has been for some  
time

time his partner as an anatomical teacher, and to his nephew Dr Matthew Baillie, who has of late also been his assistant in the same department. He has also left to the University of Glasgow the sum of L. 8000, which is to be paid them within two years. One half of the interest of this sum is to be applied for supporting the museum while it remains in London. The other half, together with the whole capital, is at the immediate disposal of the University of Glasgow, for the purpose of buying ground, and erecting proper buildings for the reception of his museum, and of making such establishments as they think may tend to promote medical and natural knowledge. The object which Dr Hunter evidently had in view by the above destination, was to perpetuate those signal benefits which the public derived during his life, from his uncommon abilities and unremitting ardour in the pursuit of learning, science and medical discoveries. And there is no reason to doubt, that his two immediate successors in the line of anatomy, Mr Cruikshank and Dr Baillie, as well as the university of Glasgow, will endeavour to discharge the trust reposed in them, in such a manner as will reflect the highest honour on the memory of Dr Hunter.

S E C T.

## S E C T. IV.

*List of New Books.*

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**O**BSERVATIONS on the structure and functions on the nervous system, illustrated with tables. By *Alexander Monro*, M. D. President of the Royal College of Physicians, and Professor of Physic, Anatomy and Surgery in the university of Edinburgh. Folio. Edinburgh.

Conspectus medicinæ theoreticæ, in usum academicum. Auctore *Jacobo Gregory*, M. D. Med. Theoret. in Acad. Ed. Prof. Vol. II. 8vo. Edinburgi.

Pharmacopœia collegii regii medicorum Edinburgensis. Editio septima. 8vo. Edinburgi. 1783.

A system of surgery. By *Benjamin Bell*, Member of the Royal College of Surgeons in Edinburgh.

burgh, and one of the Surgeons to the Royal Infirmary of that city. Illustrated with copper-plates. Vol. I. 8vo. Edinburgh.

First lines of the practice of physick, for the use of students in the university of Edinburgh. By *William Cullen*, M. D. Professor of the Practice of Physick in the university of Edinburgh, first Physician to his Majesty for Scotland, &c. Vol. III. 8vo. Edinburgh.

Philosophical Transactions. Vol. LXXII. 4to. London.

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